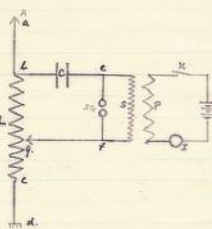


Summer 2019 - 87 YEARS



The adjustable constant q must be so placed that the LVC of the open circuit $a-b-c-d$ = the LVC of closed circuit. $e-b-g-f$ in order to obtain resonance.

I have not found it possible to obtain
tuning with this arrangement on inst.
Carpentry - at all events if the latter is
it may give as things tuning as very
Carpentry.

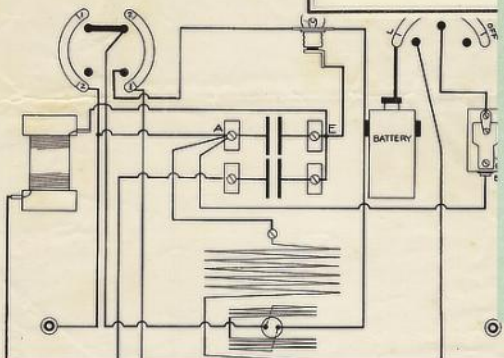
I am not now using this method

A SUMMARY OF THE APPLICATIONS OF THE PIEZO-ELECTRIC EFFECT IN RADIO ENGINEERING

BY
A. HINDERLICH, M.A.

PUBLISHED BY
BCM/N2ND,
LONDON, W.C.1

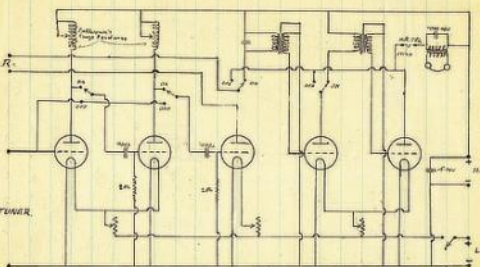
N.B.—The TOWNSHEND WAVEMETER simply by connecting Aerial and Earth to the Condenser as shown in the Diagram. Wavelengths received will not then be affected by the Wavemeter.



Detector notes.

Spord with local aircraft &
- put; / phrases about ~~birds~~ res.
~~about birds~~ a fairly heavy
seems to string down a sound in
anxiety, in fact hum up, with some-
ing may be used with high resistance
in some. Sometimes about
"perishes" (Toucan Mossie?) but much
more abundant. ~~Apparent village~~ 10-1500 ft
may be used under some conditions

DIAGRAM



Value not in use to be removed

June 1912



On _____

QUARTZ OSCILLATOR No. 11B 4.

For: Colonel M.J.C.Dennis, C.F.,
Fortgranite, Maltinglass,
Co.Wicklow, Ireland

The oscillator was connected between the grid and filament of a valve, the lower electrode being connected to the filament. In the anode circuit of the valve was a mil-ammeter and an oscillatory circuit consisting of an inductance and a variable condenser in parallel.

The frequency of oscillations was measured and is given below, together with data relating to the circuit.

Frequency in cycles per second	888 910 $\pm 10 = 337.957m$
Type of Valve	P.N.5.
Filament voltage	6
Anode voltage	50
Nominal value of grid leak	2 megohms
Approximate inductance of coil	162 μ H.
Reading of condenser	150 μ F.
Reading of condenser above which no oscillations take place	175 μ F.
Room temperature	14.5°C.

Seal not broken & go still—
Add to an avery to —
 As McMAHON,
 AM BUCKEN FINE AND TELEGRAPH,
 BAILL AINA OLIVE,
 Ago South on Chile Coast. T. 10661/22
 Quoting Enclosed No.

AN ROINN PUIST AGUS TELEGRAFA,
BAILE ÁTHA CLIATH,
(DEPARTMENT OF POSTS & TELEGRAPHS,
DUBLIN)
10th September 1925.

A Duine Vagail.

With reference to your letter of the 4th instant and to previous correspondence relative to the conditions imposed in the experimental wireless transmitting permit recently granted to you, I have to state that as an exceptional arrangement permission is provisionally given to you for the use of the wave-length band of 115-130 metres in addition to that of 150-200 metres already allocated. It is regretted that the use of other wave-lengths cannot be allowed - for the present - at any rate.

Your request for permission to communicate with places outside An Soerat is still under discussion with other Government Departments concerned. A further communication will be sent to you when a decision has been arrived at.

A copy of your letter of the 15th July last is
enclosed

Col. Dennie, C.B.

Remder sent 10/11/23
Lenther on 20/11/23

ST 3.

Patented in all the Principal Countries of the World

"Wireless" TELEPHONE RELAY Type "A."



RELAY WITH HUBBED BRASS COVER REMOVED

THIS Relay has been designed to magnify the very feeble signals as received from a distant Wireless Station, and by its two signals are quite inaudible in the best telephone receivers may be heard and readable.

In connection with a loud speaking telephone, signals of ordinary strength may be listened at some distance from the receiver, dispensing with the use of a headpiece.

Intend to magnify sounds which are already strong into very loud signals. Type "G" (1 list) is more suitable, or these two Relays may be operated in tandem with correct effect.

It can be used to magnify continuous currents as well as speaking currents, provided one is used to replace the telephone.

For Price List see last page.

JOHN, LTD., Willesden Lane, North Acton, London, W.3.
Chislewick, 1469. Telegrams:—"Skilrowals, London."

THE WIRELESS WORLD
and RADIO REVIEW

DORSET HOUSE
TUDOR STREET
LONDON E.C.4

24th March, 1932.

Col. M.J.C. Dennis,
Fortgranite,
Baltinglass,
Co. Wicklow.

Dear Col. Dennis,

I have received with very great interest your letter of March 22nd, in which you enclose a photo of your Coherer receiver and spark transmitter constructed in 1896. I certainly do not anticipate anybody staking a prior claim.

I have been talking to the Editor of THE WIRELESS WORLD about this, and have shown him your letter; he asks me if I can get your formal permission for reproducing the photo in THE WIRELESS WORLD (not necessarily in my page).

Yours faithfully,

and

PATRON**Michael D. Higgins
PRESIDENT OF IRELAND****Society Officers 2019/2020**

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Radio Experiments by Colonel Meade Dennis EI2B

Robert Brandon EI5KH & Joe Ryan EI7GY



Colonel Meade Dennis on the occasion of his wedding

Signalling Without Wires

The science behind electromagnetism as a method of sending signals without wires evolved over the 19th century, but it was Guglielmo Marconi in the 1890s who first developed an effective system to harness electromagnetism for communication over long distances – radiocommunications, as we now call it. One of Marconi's early high-profile demonstrations of the use of radiocommunications was at the Kingstown Regatta of 1898, when on the 20th July he successfully sent the first press report from a boat in Dublin bay, by wireless telegraphy, to a land station in Kingstown (now Dun Laoghaire). The report was received and printed on a Morse code punch tape machine, before being decoded for forwarding by telegram to the newsdesk of the *Dublin Daily Express*.

Shortly after the Kingstown Regatta demonstration, Monsignor Molloy, a scientist and rector of the Catholic University in Dublin, gave a lecture entitled "Signalling through Space by means of Electric Waves, without the aid of Wires" at the RDS in Kildare Street, Dublin. His lecture was followed by a demonstration of radio by Marconi. One of those in the audience was Colonel Meade Dennis, from 'Fortgranite', Baltinglass, Co. Wicklow, who decided to recreate Marconi's demonstration for himself. His spark-gap transmitter and a coherer connected to a Morse sounder as a receiver worked successfully over a distance of 70 yards. That was in 1898. Although by no means the only person experimenting at the time with spark transmitters, the fact that Colonel Dennis continued his experiments as a hobbyist,



Fortgranite as it is today

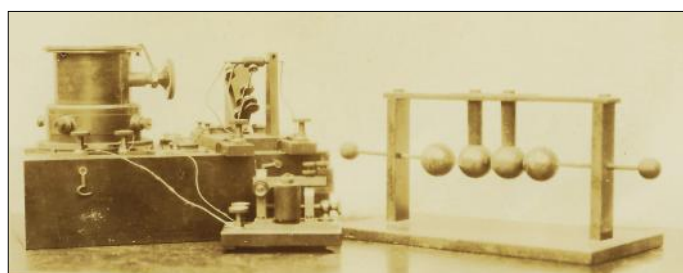
rather than for commercial or academic purposes, and became a licensed radio experimenter in due course, supports his claim to be the "First Ham" – the first amateur radio experimenter.

Experimenter Call Signs

When call signs for radio experimenters were introduced, around 1910, Colonel Dennis was assigned the call sign **DNX** for his experiments in England (he was posted to Woolwich at the time) and later he was allocated the call sign **2HY** for the station at his home in Co. Wicklow. Following Irish independence he was issued with the call sign **GW11B** for his Co. Wicklow station (experimenter stations in the Irish Free State used the GW prefix, which was not then used in Wales). In 1928 the EI prefix was allocated to the Irish Free State, so on 1st January 1929 existing licensed radio experimenters (there were 19 of them) were assigned EI call signs, **EI2B** for Colonel Dennis. He continued to be an active radio experimenter until the war brought a stop to such experiments in 1939. Colonel Dennis died in 1945 at the age of 80.

Wireless Clubs and Societies

In 1913, Colonel Dennis was one of the founder members of the Dublin Wireless Club, which later amalgamated with the Radio Association of Ireland to form the Wireless Society of Ireland (WSI), which was involved in all aspects of radio. The original "Irish Radio Transmitters Society" was formed in 1926 by members of the WSI who were more interested in the construction of amateur transmitters and receivers rather than broadcast equipment. The IRTS that exists today consists of an amalgamation in 1932 of this group with the WSI. Colonel Dennis was the first president of IRTS.



The First Ham's Coherer receiver Morse sounder spark coil and four-ball oscillator

Notes and Correspondence

Fortgranite remained in the Dennis family until it was sold earlier this year by Meade Dennis's great-granddaughters, who are now living in the UK. They were very conscious of their great-grandfather's unique contribution to early radio experiments, and preserved his radio equipment and papers.

Prior to the house sale, they asked IRTS for help in identifying radio equipment and artefacts of historical interest. Responding to this request, we spent a number of days at Fortgranite retrieving pieces of radio hardware from basements and attics. During this process we were shown Colonel Dennis's notes and correspondence relating to his radio experiments, which we could see contained fascinating insights into the way he developed his understanding of the science of radiocommunications, and the difficulties he encountered acquiring or manufacturing the components needed to undertake his experiments. The correspondence also highlights bureaucratic challenges faced by radio experimenters, with piecemeal approvals grudgingly given by the licensing authorities.

Colonel Dennis catalogued circuits, formulas and construction methods gleaned from various sources over the period 1910 to the 1930s in a "scrapbook" of almost 200 pages, which also contains references to relevant articles in contemporary journals. The family agreed to lend this scrapbook to IRTS for scanning and publication, along with more than two hundred pages of correspondence and other papers relating to his radio experiments. This material is now available for all to see at www.irts.ie/ei2b divided into different categories for ease of access. We have indexed the scrapbook using Colonel Dennis's own index.

These notes and correspondence makes fascinating reading for anyone interested in early radio experiments. More than that, however, publication provides a permanent record of potential research material that may not otherwise be readily available.

Where did the "First Ham" transmission take place?

Some publications suggest that the Colonel Dennis's 1898 transmission took place at Woolwich Arsenal in East London.

However the recently-scanned material, now on the IRTS web site, indicates that Fortgranite, Co. Wicklow was the location of the first transmission. In the Marconi Demonstration section, we see that Colonel Dennis wrote "It was after attending this lecture [in Kildare Street, Dublin] that I made my spark transmitter and receiver probably the first amateur set ever made". The family have told us that the Colonel was living at Fortgranite in 1898, and only moved to Woolwich in 1901, remaining there until the end of the First World War.

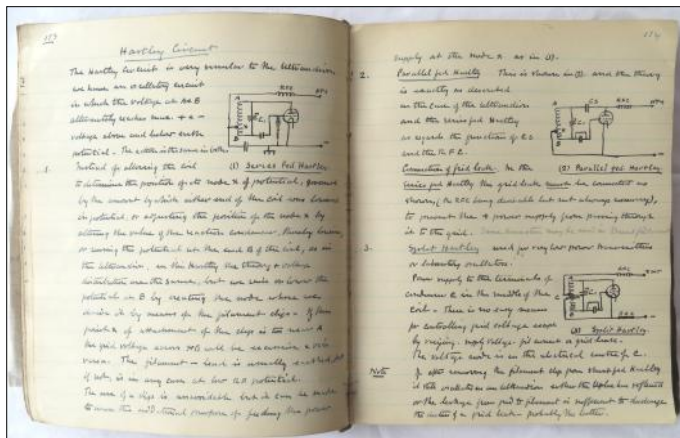
In 1931 Colonel Dennis sent a photograph of his "First Ham" set to RSGB, which they published along with the comment that "... the original apparatus is still in existence at EI2B" (T&R Bulletin, September 1931). Also noteworthy is the fact that, among his papers in Fortgranite, we came across a newspaper cutting from 1944, which the Colonel had clipped to a letter written to him by Tom Green EI9N in 1943: the cutting referred to a talk given by Tom in which he stated that the 1898 spark transmitter made by Colonel Dennis was constructed in Ireland.

The view that Woolwich might have been the location of Colonel Dennis's first transmission probably arose because he was stationed in Woolwich when, in 1910, he obtained his first call sign DNX. But it seems that his first transmission took place in Co. Wicklow.

Radio Equipment at Fortgranite

A selection of radio related equipment made and/or used by Colonel Dennis was identified and secured to prevent it from being inadvertently sold at auction. Among these items were antenna matching units, crystal detectors, and various pieces of home built circuits including tuning units and home built battery packs. Also recovered were part finished projects and spare components, plus a large roll of antenna wire and boxes of home brew crystals. All of this has now been donated to the Computer and Communications Museum of Ireland, at NUI Galway.

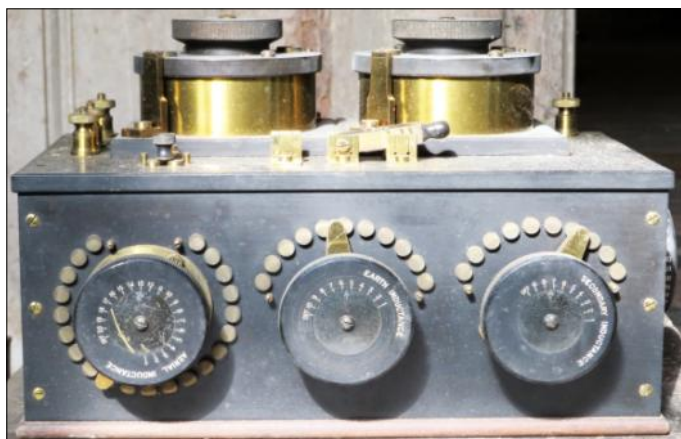
To further illustrate the vast range of technical knowledge and interests held by Colonel Dennis, he had an extensive workshop equipped with both woodwork and metalwork tools, including a small lathe. Indeed in one correspondence from the British Admiralty to Colonel Dennis, he was complimented on the 'Factory quality' workmanship of a new Detector unit he had designed and made for them to test on board their ships. This is further supported by high level, detailed technical drawings he had provided.



The Scrapbook



Some of EI2B's homebrew equipment



Commercial Antenna Matching unit

Colonel Dennis also experimented with X-ray machines and photography, and was one of the foremost experts of his time in crystal selection and engineering. A selection of suitable crystals was a vital accessory for radio experimenters in the early years, and we were interested to read in a report from an IRTS station participating in National Field Day at Brittas Bay in 1936 that the participants "... greatly appreciated the visit from EI2B, who, with supplies of crystals sufficient to cover practically all amateur frequencies, drove over from Baltinglass early on Saturday ...".

EI2B's Legacy

Thanks to the foresight and generosity of the Dennis family, we now have a unique online library of notes and correspondence relating to early radio experiments that, at the very least, make interesting reading but, more than that, may contribute to an understanding of the development of radiocommunications in the early 20th century. Also, the Computer and Communications Museum of Ireland at NUI Galway has a significant inventory of equipment relating to early amateur radio experiments to add to its collection.

I'm learning Morse again Colm Brazel EI4KO

At the moment I'm using <https://play.google.com/store/apps/details?id=com.wolphi.morsetrainer>. It is called Morse Trainer for Ham Radio by Wolphi LLC and is available for Android download on Google Play - price €3.41.

Currently my settings in that app are

Frequency - 1080Hz
Waveform - Sine
Fading - 10%
Farnsworth - On
Farnsworth speed - 10 wpm
Speed - 24 wpm

I like looking at videos describing why others learn CW, especially those who describe mistakes they've made in learning CW.

<https://www.youtube.com/watch?v=7QcvtbuLpbA>
<https://www.youtube.com/watch?v=9h8nZAqBYBQ>

I passed my Class A Morse test in 2017 having followed a course led by Joe Ryan EI7GY at SDR, South Dublin Radio Club. To pass the test you need to understand, read and transmit Morse at 5wpm. I worked hard to succeed at the test but no way did I consider myself ready for CW contacts on the ham radio frequencies. That work would be deferred for another

First EI Call Signs

On 1st January 1929, the provisions of the International Radiotelegraph Convention of Washington, 1927 came into force. These provisions were significant for radio amateurs: they included international recognition of the amateur radio service and the allocation of certain bands for radio amateurs. Some bands were allocated exclusively for amateur use, while other bands were allocated on a shared basis, to be shared with commercial and mobile services.

Call sign prefixes were also decided at this Convention, **EI** being allocated to the Irish Free State. Arising from this change, existing radio amateurs in the Irish Free State, who had been using call signs prefixed with **GW**, were issued with the following call signs, with effect from 1st January 1929:

EI2B – M.J.C. Dennis, Baltinglass, Co. Wicklow
EI3B – Wireless Society of Ireland, Trinity Street, Dublin
EI4B – Wireless Society of Ireland, portable operations
EI5B – J.P. Campbell, Sutton, Co. Dublin
EI6B – H.J. Duncan, Sandycove, Co. Dublin
EI7B – W.F. Warren, Sandymount, Dublin
EI8B – Dermot & Donal O'Dwyer, Leeson Street, Dublin
EI9B – H. Goldsbrough, Fethard, Co. Tipperary
EI2C – L.H. Carder, Castlenock, Co. Dublin
EI3C – E.C. Boursin, Listowel, Co. Kerry
EI4C – Dennis G. Kennedy, Donnybrook, Dublin
EI5C – W.B. Bates, Ashbourne, Co. Meath
EI6C – George Horrander, South Circular Road, Dublin
EI7C – J.B. Scott, Rathgar, Dublin
EI8C – W.H. Benson, South Circular Road, Dublin
EI9C – G.R.S. Pennefather, Summerhill, Cork
EI2D – W. Fitzpatrick, Naas, Co. Kildare
EI3D – S. Bourke, Bray, Co. Wicklow
EI4D – R. Sadlier, Rathmines, Dublin

EI7GY

other day. That day came around recently having heard that Dermot EI6FZ and Leo EI8BR were leading another course in CW at SDR. They kindly allowed me to join the course. Even my 5wpm had gone very rusty.

Where am I now proficiency-wise? Probably not up to speed yet. A lot more work has to be done. But the important thing is I'm happy with my understanding of individual letters and characters. Following work already done, the method I've found to learn by I find fun and I can sense progress. CW is really cool to know especially if you are in any way a ham-radio fan.

SDR follow a course based around Morse Code Operating for Amateur Radio <http://www.arrl.org/shop/Morse-Code-Operating-for-Amateur-Radio>.

This is structured around the IRTS Morse Test:

The test consists of both reading and sending Morse at 5 words per minute, divided into three sections:

- 75 characters of plain language in 3 minutes
- 9 groups of 5 figures
- 5 punctuation marks

I had passed the test but I needed to continue progress from the base preparedness provided by this course. I was encouraged by points made by Scott KW4JM, in his YouTube video, "Morse Code - if I Could Start Over Again".

[Continued on page 12]

Athlone Rally & Dinner 2019



Photos by
Anthony
EI6GGB



IRTS AGM 2019 - Presentations



Photos by
Thos
EI2JD



Enniskillen Rally - Photos by Joe EI2JZ



Limerick Rally - Photos by Joe EI7GY





The Amateur Radio Emergency Network in 2019

John Ronan EI7IG, national emergency communications coordinator

ei7ig@aren.ie

Early in April, there was a Voluntary Emergency Services (VES) Day held in Cork Institute of Technology. The idea of the day was to provide the VES a forum to demonstrate their equipment to other VES personnel in the Principal Response Agencies (PRA's - An Garda Síochána, Health Service Executive and Local Authority). Thirteen agencies were invited including Civil Defence, Order of Malta Ireland, Irish Red Cross, Irish Coast Guard, Irish Search Dogs, Kerry Mountain Rescue Team, Blackwater Search and Recovery, Search and Rescue Dog Association, RNLI, 4x4 Response Ireland and the Amateur Radio Emergency Network (AREN).



APRS track from recent Public Service event in Connemara



*EI7IG presenting at VES Day 2019,
Cork Institute of Technology*

The event was organised by Conor O'Neill, EI4JN, on behalf of the Voluntary Interagency Sub-group, a working group under the Major Emergency Management Regional working Group structure in Region South, which covers Cork and Kerry.

There were presentations from Civil Defence, Irish Red Cross, Irish Coast Guard, Irish Search Dogs, Blackwater Search and Recovery and AREN outlining the organisations functions and abilities.

EI7IG gave a short presentation on behalf of AREN, giving some historical background then quickly moving on to highlight what services AREN could provide to the VES and PRAs which broadly covered the following:

We do voice communications on VHF/UHF. We have access to some fantastic repeaters and repeater systems set up by groups around the country. We are frequency agile. We can very quickly put links in place parallel to an organisations own systems, to effectively increase their capacity to deal with radio traffic.

We do low bandwidth, near-real-time data networks. Amateur radio operators know it as the Amateur Packet Reporting System or APRS. Used primarily on VHF, APRS is 35 years old this year and still probably the most versatile of systems. In Ireland it has been used in everything from tracking vehicles in ultra-marathons, cycle events and snow-storms, to tracking walks people on hills, to boats transmitting harbours. There is APRS infrastructure put in place by groups in many parts of Ireland.

We do voice communications on HF. Radio amateurs understand how best to make use of the Near Vertical Incidence Skywave (NVIS) propagation mode (as demonstrated by the winner of the 80m counties contest) for the purposes of beyond-line-of-sight communications.

We do digital communications on HF. We use the Winmor protocol as part of the Winlink system for sending email over HF radio. In this case we are not dependent on NVIS mode, and again, as amateur radio operators, we understand how to configure antennas for this scenario. In a past exercises EI4JN and EI2HIB demonstrated to multiple agencies how a single HF station could send email out of an area with no other means available.

We are testing and experimenting with Digital Mobile Radio (DMR). DMR is interesting for several reasons. DMR repeaters use standard internet protocols to connect themselves into an overall system. Therefore it is possible to have a Net Control or Rear Control at a completely different location to the actual incident. Also, due to the fact that there are two time-slots available on any DMR repeater, it is possible to have two completely separate nets operating simultaneously through a single repeater. This is, in effect, a doubling of capacity of a single channel.

The Es'hail 2 Geostationary satellite is something to be looked at in the future. The rapid development of simple SDR based ground stations is a promising sign that at least simple voice and data nets could be formed through this system.



EI4JN's Winlink station at Torc Waterfall, Killarney

Radio communications continues to evolve within our served agencies, from analogue voice to TETRA voice. TETRA has brought vastly improved coverage to most agencies, but also the beginnings of inter-operability. Smartphone and tablet-based dispatch systems are in daily use. The agencies have become used to passing files, images and digital messages. Consequently, there is a much higher dependence on infrastructure than ever before and while the networks are highly resilient, none are invincible. In order to remain relevant, AREN must also be able to provide some of this capability. In order to fill this gap, this requires up-skilling in the area of TCP/IP, wireless mesh networking and microwave propagation.

To fulfil this need we are experimenting with the Amateur Radio Emergency Data Network (AREDN) mesh networking software. This is custom software deployed on commodity hardware that empowers licensed amateur radio operators to quickly and easily deploy high-speed, fault-tolerant wireless data networks at 2.4 and 5.8GHz.

That was the broad scope of the presentation which was well received and generated many questions afterwards, including the possibility of some new licensees.

How did we get here?

Being invited to present at this event did not happen by accident. Previous AREN members and coordinators spent many a winter's night driving to and from meetings and building relationships. Towards the end of his time as AREN coordinator John Ketch, EI2GN was anxious that we form a multi-year strategy, and also to develop a more systemised approach to how AREN should operate.

Following this strategy document over the last number of years, has led to a lot of work being done on updating various handbooks, getting them in line with current best practice, and, in some cases developing new best practice and feeding it back to the International Amateur Radio Union (IARU).

We have held national meetings once every 12-18 months in order to update members training, (and more recently update training record cards), demonstrate new equipment, discuss new ideas, and decide on what items from the strategy should be pursued for the following twelve months. These decisions are always based on the wishes of those attending and reflect the thinking of the entire membership.

We received donations of various items of equipment over

the last number of years, the most significant being what we term our Mobile Command Post (MCP). This took up many man hours where it was serviced, sanded down, painted and had an initial fit-out, over the course of several weeks, several where members travelled to Cork on the weekend in order to complete the work.

While this was going on there was a major change in how Emergency Management is done in Ireland. For the curious, all the relevant documents are available at www.mem.ie, more than enough to make one's head spin. Crucially, while the documents were being drafted at governmental level, we were able to get AREN named in these documents as a resource available to the other organisations.

On reviewing the MEM documentation subsequent to its publication, it became apparent that AREN members need an understanding of the basics of the system within which we may be asked to operate (The Framework for Emergency Management). Furthermore, in the framework, there is considerable weight given to appraisal (both self appraisal and by external bodies), along with training standards and nationally recognised training and accreditation.

However, once someone becomes a licensed radio amateur, there is no longer any requirement to demonstrate ones technical and communications ability for the purposes of assessment by an outside agency. This poses a unique challenge for AREN. How do we demonstrate in an open, honest and verifiable way that we continue to hone our skills and technical ability?

We began by using a simple After Action report. This was, quite simply, to record what the activity was, who was present, what worked, what did not, what knowledge or skills gaps were present and what could be improved upon for the next event. We followed this up then with the introduction of a Training Record card/sheet.

Broadly the record card covers four types of training:

- Knowledge based training – i.e. the Amateur Radio Licence and the Online MEM Introduction course. Regarding the MEM course, it makes perfect sense for everyone to be aware of the system within which we operate.
- Skills based training – i.e. voice procedure, message handling, MCP setup, risk assessment, forward and rear control. All subjects that everyone should be familiar with.
- Performance based training – examples include digital modes, NBEMS, Winmor, APRS RF tracking and Search Skills, all subjects that may require more in-depth knowledge of a particular area.
- General training – keeping ones skills up, this would include field days, public service events, and contests. With the submission of a log to the adjudicating body i.e. IRTS, CQ, ARRL, RSGB etc, it is easy for a third party to verify participation in field days and contests.

This then naturally leads on to different skill levels, as, over time, and participation in events of all sorts, one develops a broader range of skill sets.

AREN Member Training Record Card				
Name:	Call sign:	Region:	Joined date:	
Requirement	Member fills	Member fills	Official use	
Holds amateur radio license				
Dualband HT				
Red (New members start here)	Trained/ obtained date	Demo date	Approved by	
MEM online				
Knowledge of handbook				
Meeting attendance (e.g. Dromineer)				
Field day event 1				
Field day event 2				
Amber (Red level completed, approved to attend Public Service events)	Trained/ obtained date	Demo date	Approved by	
Public Service event 1				
Public service event 2				
Voice Net message handling receiving				
Voice Net message handling sending				
Voice Net message handling relaying				
Has VHF/UHF portable equipment and demo on air				
Has HF NVIS / P equipment and demonstrated on air				
Uniform				
Green (Amber level completed, approved for callout deployment)	Trained/ obtained date	Demo date	Approved by	
Participate in served agency exercise 1				
Participate in served agency exercise 2				
APRS RF tracking				
APRS RF base station with map				
Data message handling Winlink Winmor				
Data message handling Winlink Packet				
Data net message handling NBEMS				
Operate minimum 24hrs on emergency power				
Sustenance, food, shelter for longer than 6hrs				
Blue (Green Completed)				
Endorsements (Special skills)	Trained/ obtained date	Demo date	Approved by	
Net control operation				
Callout system operation				
Forward control operation				
Rear Control operation				
MCP Setup				
Risk assessments				
Control Room familiarisation (AGS)				
MEM Information management (IAEMO)				
Search skills (CSR)				
Radio operator level 4 (CD)				
ARRL SET				
IARU SET				
First aid CFR, CFR-A, FAR, EFR				

Sample AREN Training Record Card

All public service and training events attended should, as a matter of course, result in an after-action report which is kept on file. There is a saying (which takes many forms), "if it wasn't documented it didn't happen". Some years ago, the Department of the Environment Emergency Planning section requested records of AREN Training, and it was very useful to be able to quickly respond with a large number of reports.

The introduction of a training record card in 2017/18 has caused quite a bit of controversy and discussion. However it seems that we are broadly in line with best practice internationally as, in February of this year, the ARRL published a new Amateur Radio Emergency Service (ARES) plan, aspects of which are very similar to what AREN developed (www.arrl.org/news/new-plan-aligns-ares-with-the-needs-of-served-agencies).

Predicting the Future

Where we have come from

In 2007 I (John, EI7IG) was fortunate to attend, and present a paper at, the Global Amateur Radio Emergency Communications Conference (GAREC). While there, I tried to take in as much as possible in order to report back to the IRTS Committee at the time. Winlink and Pactor III were still relatively new and Hurricane Katrina was still in the consciousness and many of the presentations outlined how big a part the Winlink and other digital systems had played during the aftermath of Katrina.

Since then, Pactor 4, ARDOP, ARDOP2 VARA and NBEMS have all come on the scene as tools for HF digital communications. At the time I recommended to IRTS that Winlink and ALE should be seriously looked at as tools for HF digital communications. Since then the Winlink system has continued to grow, so that prediction was prescient.

D-Star on VHF/UHF was still new, and was being rolled out throughout much of the Gulf States after Katrina. D-Star appeared to be taking off in popularity. At the time there was little or no digital activity in Ireland, but digital voice modes on VHF/UHF appeared to be gaining traction in North America, it seemed only be a matter of time before they hit our shores. I was not entirely convinced about D-Star. Since then other digital modes have appeared such as DMR, Fusion, P25, NXDN. Though it is not clear which mode is more popular in Ireland, or indeed Europe, however the Brandmeister DMR network appears to be growing at a phenomenal rate.

EchoLink and IRLP were still relatively new at the time, since then their popularity has waned a bit, possibly IRLP more than EchoLink, but Zello appears to be taking over from both and has seen lots of use during various disasters in North America and elsewhere.

I suggested Memoranda of Understanding should be pursued with other voluntary emergency services. This whole area of MoUs has been superseded by the Framework for Emergency Management process. Where there is now engagement between the PRA's and the VES, we have a seat and are sitting at the table.

Various presenters outlined that the lack of suitable credentialing (ID-badges to you and me), created difficulty for everyone during Katrina. AREN members do currently have ID-badges; however we still have not made them verifiable by a third party, though we do have a broad plan to close that circle.

Where to from here (Technically)?

I think the Winlink is still going to dominate the area of HF digital communications due to both the ancillary functions that come with the software, and the various different options of types of modem available (hardware or sound-card options). NBEMS will have a place, but it isn't as effective as a force-multiplier. One or two well equipped AREN volunteers could provide 24x7 HF digital communications out of an area without needing anyone at a 'base' due to its semi-automated nature. NBEMS however generally requires an operator to communicate with.



Inverted V antenna deployed on Mobile Command Post during training

Voice repeaters, in particular the Southern Ireland Repeater Network, are a fantastic resource. SIRN has been used to good effect during several severe weather events. I think the amateur radio population as a whole needs to support the hard work and dedication by all repeater keepers throughout the country. These do and will continue to be a critical component of any response by amateur radio operators to crises within our communities.

Again, there are APRS digipeaters on various high sites throughout the country, along with many running from home QTHs. APRS is another tool in the emergency communications toolbox. Its utility for tracking of and guiding mobile assets in a time of need should not be underestimated.

Of the VHF/UHF digital voice modes available, DMR is attractive due to how efficient it is at using a single channel and the fact that it can carry messaging and position traffic over the same channel. However, due to the cost of the equipment and the different mind-set of operation that comes with digital modes particularly DMR, it is too early to say if any digital voice mode will become useful/popular with the amateur emergency communications community.

Conclusion

I have to extend my thanks to the various members of the amateur radio community who have donated time, money, equipment and advice over the last number of years, your contribution has been much appreciated. Likewise to all the

radio amateurs in Ireland who have actively participated in AREN over the years, including silent keys, all your contributions have been most valuable.

Given all of the above, dear reader, if you have free time and are looking for an area to apply yourself whether it be in fund-raising, web-development, training, research and development, or indeed any area related to public service communications please feel free to contact either Conor O'Neill, EI4JN, or the author John Ronan, EI7IG

Let me finish with some quotes that stuck with me from GAREC 2007 which were all influenced by the damage and human suffering inflicted by Hurricane Katrina:

"Emcomm is our way to pay back for the use of the spectrum"

"When all else failed, amateur radio stepped up to the plate"

"Come in to help, not to take over"

"We must continually prepare, train, practice and test"

Finally, and my personal favourite,

"In a disaster, you don't rise to the occasion, you sink to your level of preparedness"

For more information - ei7ig@aren.ie

[I'm learning Morse again, Continued from Page 5]

The first one he makes is, 'Lose the Visual'. I'd been mentally translating characters into their visual representation, for example, J = • — — — Then I'd use that visual trigger to identify the letter. Lose the visual, urges Scott. Forget the visual, concentrate only on the sound, listening is paramount!

Second point he makes is to use the Koch-Farnsworth method. Farnsworth determines importantly the space between words allowing you time to memorise and reflect on what you've heard. But it's important also to hear the dits and dahs at the speed you'll hear them online.

I had to try this out. CW Trainer Morse Trainer recommended by Joe Ryan EI7GY had a Koch-Farnsworth mode you could set in its Groups-of-5 mode (5 characters per group). I found Koch-Farnsworth mode of great benefit in returning to where I was at end of the initial course with SDR.

According to KK4JH settings should be 25 words per minute Farnsworth 5wpm. I think he has this wrong way around settings should be 5 words per minute Farnsworth and 25 wpm for words. (*Editor's note: regardless of who is right or wrong, the idea is to send each character, whether letter or number, at 25wpm, but to have large gaps between characters to keep the average speed to 5wpm*).

I turn off the Koch setting in Groups of 5 mode and turn on all the letters and some of the numbers and punctuations to learn that way occasionally dropping back following the Koch method. If I find I miss a letter or character I go to the 'own text' mode and drop it in there and concentrate working

on it for a while. The overall approach using this mode and the other modes in CW Trainer Morse Trainer works well. There are other modes as well, for example QSO and English words. While driving or on walks or setting aside time to listen, plug in the ear buds and switch on the app.

KK4JH has other points to make you can look at his video to see. I'm currently learning at Farnsworth speed of 10 wpm and speed 25wpm, frequency set to 1080 Hz. But I play with different settings; nothing needs setting in stone.

It's fun, but who knows I might change my approach yet again. I hope you in your learning of CW find an effective means to do so that will reward you with good fun and satisfaction. CW is music to the ears and just as in the case a professional musician, a little practice every day goes a long way!

One day I'll make my first contact on the air. Meanwhile I'm enjoying learning CW again and if you have an interest in ham radio, you should strongly think of taking up CW too. It's fun. Even the NASA astronauts know Morse.

Editor's Note: There is no substitute for on-air CW listening and decoding. Find the slowest CW QSOs on any band and see how much you can copy. You should be ready for an on-air contact when you can copy everything at your "normal" speed, whether that's 5wpm or 12wpm, or anything in-between. Remember too that there's more pressure on-air — what will you do if you can't copy everything? So, make sure your first QSOs are with friends who will know to slow down when needed.

News from around the Clubs

Skerries Radio Club

Pat Fitzpatrick EI2HX

Mills on the Air Weekend 2019

Once again the Skerries Radio Club (EI2NCR) activated one of the mills in their town on the 11th and 12th of May for the Mills on the Air Weekend.

Saturday

With a leisurely start the club members started to arrive on site from 08:45 on a windy Saturday morning, and when enough of the members had turned up it was deemed safe to start erecting the mast and aerals that were to be used for the weekend.

The weapons of choice for the weekend were a 12m telescopic mast, a full-size G5RV aerial and a Kenwood TS 570D transceiver. With the centre of the aerial attached to the mast and winched up, this left the ends to be tied off, but as the mill is built on a height, and on one side the ground drops off sharply, a couple of poles were used to take some of the inverted shape out of the aerial and getting it as close to North/South as the ground space we had would allow us. With that job done, the area was cordoned off by the use of a roll of red and white hazard tape to keep the public out of harm's way as the grounds has two fully-operating mills and a watermill - with plenty of guided tours every day. When a tour arrived we would stand by and let the visitors look around and, as always, some of the public were interested in the fact that we were talking to other mills across the world "on that bit of wire".



EI8HIB's SOTA 2m equipment

Conditions weren't great on the Saturday but we managed to work a few contacts with fellow mill stations and a few others. The picture above shows some of Frank EI8HIB's SOTA 2m equipment. All too soon the day ended, as the mill shuts down around 17:00.

Sunday

Sunday was a better day with almost no wind and it was noticeably warmer. The day for us started at 09:00 and it was straight on the air once we reconnected the coaxial cable to the radio as that was the only item we disconnected on Saturday.

Conditions were a bit better than Saturday and some mills were worked again with their different crews and some new mills were also worked. Again there was a good number of visitors and tours over the day.

And finally

The mill complex is open 359 days a year so there's plenty of time to tour the fully functioning windmills and watermill. After the tour (around 50 minutes) you can rest your weary bones and refresh yourself with the fine menu the mill has to offer.

Skerries Radio Club would like to say a big thank you to Ray, Paddy and the rest of the staff of the mill for looking after us over the weekend. You can find out more about the mills at skerriesmills.ie.

The club normally meets every Tuesday night, but is now closed until the first Tuesday in September. Any of the members that are free meet up every Thursday afternoon from 15:00 in, surprise surprise, the mill. We hope to see you there.



Going Up

Dundalk Amateur Radio Society

Brian Whelan EI8EJB

At the DARS 2019 AGM held at the start of May 2019, the following were elected as Committee Members/Officers:

Chairman	Hugh EI9KF
Secretary	Brian EI8EJB
Treasurer	Jim EI2HJB
PRO	Thos EI2JD
QSL Manager	Seán EI4IP
Technical Manager	Richard MI3CQR
IRTS Representative	Pat EI2HX
Librarian	Michael EI1581
Caretaker	Ivan EI1166

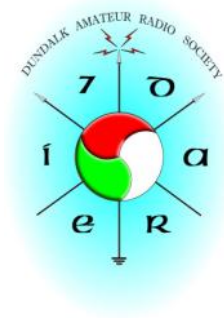
The position of President is not due for re-election and is held by Kieran EI9DA.

With thanks to the generosity of the members, DARS now has a comprehensive library of radio & electronics books and manuals in both printed and soft-copy formats. This is a great resource for all the members, both experienced and not-so-experienced alike.

DARS is currently planning some events to celebrate its Golden Anniversary which occurs this year. The club came into being in 1969 and, to commemorate the auspicious occasion, we plan to hold some radio, public awareness and social events to take place before the end of the year. Watch this space!

Congratulations to one of our members, Robbie who has received his new call sign, EI2IXB, and who is making good use of the call sign already! Well done Robbie!

DARS were delighted to find out that we had won the IRTS 2m Counties Contest in the SSB/FM High Power Portable section using the club contest call sign EI0W/P. Many thanks to Thos EI2JD, Jim EI2HJB and Brian EI8EJB who put the portable station on air from the summit of Clermont Cairn in



north Co. Louth (IO64UB). A truly great day was had up on the windy high site.

Improvements have been made to EI2CCR, our 2m analogue repeater. Also EI2MOG should be back up and running by the time Echo Ireland goes to print, as hopefully will our MMDVM UHF repeater EI7DKD.

Looking forward to another hectic schedule for the upcoming year and thanks to all those who have lent their support to the club, not just recently, but in the last fifty years.



EI0W Station and Antenna



Frank, Michael and Austin at Skerries Mills on the Air



Pat EI2HX at Skerries Mills on the Air

Galway VHF Group

Steve Wright EI5DD

Galway VHF Group Report

The Galway VHF Group activities commenced with the provision of communications for the Kinvara Rock and Road Marathon. Emergency communications cover was provided for both the Full and Half Marathons using the digital mode *Yaesu Fusion* on 2m. The signals were all perfectly readable throughout the event. The weather was reasonable on the day and road conditions were good and not slippery. As a result, there was very little draw on our services. A link, via TETRA, to the Order of Malta from our net control situated in the field was available but, apart from initial checks, was not used. APRS was used throughout the event which removed the necessity to check locations of individual operators during the event. This worked well and reduced all irrelevant chat. All operators switched on their APRS on leaving home so there were no anxious moments wondering whether they were en-route first thing in the morning. A quick check on APRS.FI confirmed their status. A quiet day for our operators on this occasion. The APRS tracks are shown in Fig 1. These demonstrate those leaving their homes and heading to the event and show the loops for the Full and Half Marathon.

The Connemara Ultra Marathon took place on the day of the AGM which was unfortunate. Our primary communications were on 80m, and 2m between the medical centres in Maam Valley and Maam Cross. APRS was used throughout this event as it had proven successful during the Kinvara event. One operator followed behind the Ultra Marathon, 39 miles, and the other behind the Full Marathon, 26 miles. Any incidents or accidents were called into Net Control and help was dispatched immediately. Two operators were situated along the stretch between Leenane and the finish line at

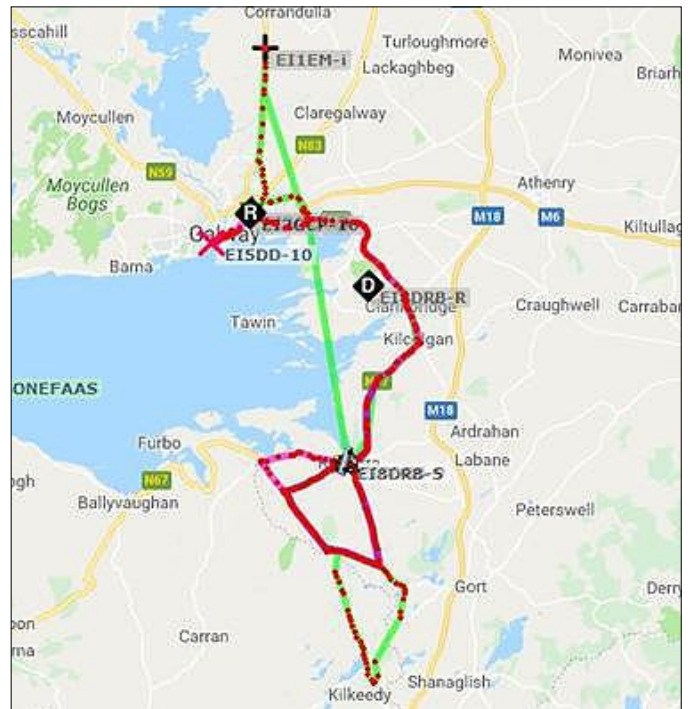


Fig. 1

Maam Cross. These operators looked after the Half Marathon, the walkers and the participants from the Ultra and Half Marathon that had pulled well ahead of the main bunch. The map of the course is shown in Fig. 2 below and it is obvious why VHF would not be suited to this event. Our 80m system has proven itself over many years.

Leenane was a focal point in previous years, where a number of Marathon runners suffered from hypothermia and were triaged prior to transport to the medical centres. Fortunately, the weather was kinder this year. The last stretch from Leenane to Maam Valley was swept for the last of the runners prior to the uphill run towards Maam Cross finish line. The system worked without problems and all communications systems were adequate for the event.



Fig. 2



Fig. 3

Our APRS system worked perfectly for the duration of the event as shown in Fig 3. Again, it reduced the level of unnecessary chat covering frequent position reports. Our net controller was able to see at a glance where all the stations were located on his laptop screen. The Gardai were shown the location of the main pack of marathon runners from the screen of the mobile phones. We suspect that this facility had never been demonstrated in the area before as there were many questions about the system and how we managed to plot the positions. Fig. 4 shows the APRS plot of the whole event from leaving Galway to return.

Work continues with the preparations for the expansion of the Galway Digital Network. A further three Hytera DMR repeaters are currently being firmware upgraded and programmed ready for placement on sites within the year. The analog repeater on Abbeyknockmoy will be replaced by a DMR repeater, and the other two repeaters will be situated on Inishbofin Island and Loughrea respectively. Our predicted coverage is shown in Fig. 5. We hope to run a roaming facility between the repeaters which will act in a similar way to moving between cells on a cellular network. We thank Enda, EI2II, Des EI5GT and Ronan Coyne for their assistance and kind offers to place equipment on the Inishbofin and Loughrea sites.

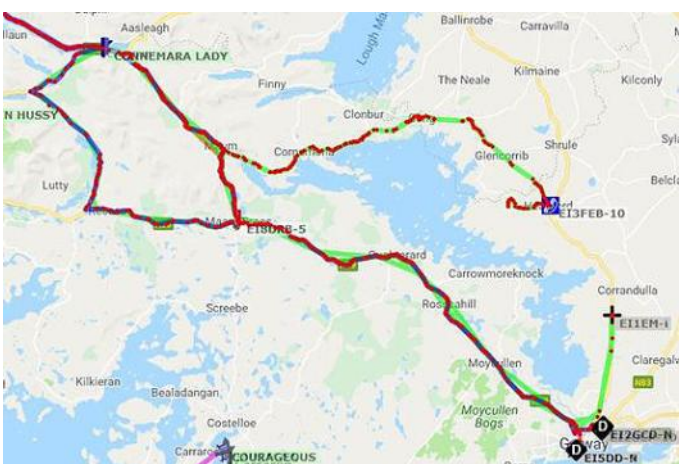


Fig. 4

The Multi-Mode Digital Gateway, located to the West side of Galway City, has been upgraded to transmit and receive D-Star along with Yaesu Fusion and DMR transmissions. This seems to be working well with the current level of activity. As the gateway becomes busier there will be a review of the facilities. The Yaesu Fusion gateway, EI2GCD, located in Salthill, continues to see good use with facilities to link to Wires-X nodes around the world. The Galway repeater, EI2TBR, is a Fusion repeater with Wires-X capabilities and run by the Galway Radio Club. There are plans to re-locate this repeater to a higher site shortly.

In the meantime, we look forward to an increase in digital activity in Galway and surrounding areas. We currently have 32 operators in the Galway and Mayo area operating DMR Fusion with a couple running D-Star and P25.

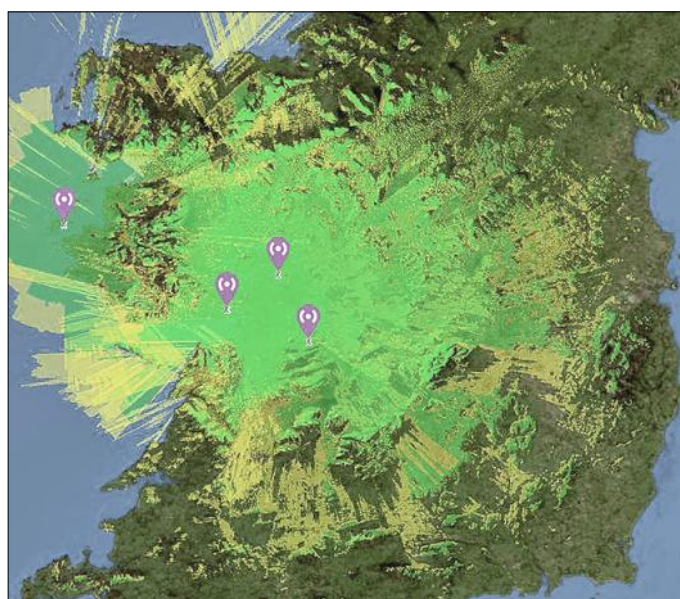


Fig. 5

Lough Erne Amateur Radio Club

David Calderwood GI4VHO

Lough Erne Rally

Our annual rally was held on Sunday 12th May at the SHARE centre near Lisnaskea. Attendance was around 170 visitors with around a third from the Republic. Traders reported satisfactory business. You can see a video of the rally on our website www.learc.eu - thanks to Peter Homer EI4JR. A montage of photos from the Rally by Joe Guilfoyle EI2JZ is in this edition of Echo Ireland

Barbeque

Our last meeting of this session will be held on 2nd June and will be a barbeque for members and friends.

GB2MAC Geoparks Activation

We will be unable to carry out our annual activation of GB2MAC at Marble Arch Caves for the Geoparks weekend this year as the site we normally use is not available.

Kerry Amateur Radio Group

Declan Horan EI9FVB

On 19th March last, Kerry Amateur Radio Group (KARG), commemorated the 100th anniversary of the first radio telephony transmission across the Atlantic, East to West, between the former Marconi Radio stations in Ballybunion, and in Louisbourg, Cape Breton, Nova Scotia. Today, Coláiste Bhreanainn occupies the site of the Ballybunion station, and this is where the celebrations took place.

To celebrate the historic event, Guglielmo Marconi's daughter, 89-year-old Princess Elettra, her son Prince Guglielmo Giovanelli Marconi, and his wife Princess Victoria, visited Ballybunion for three days. Arriving on Monday 18th March, the royals were treated to a superb Italian wine-tasting event, combined with the best of local foods.

The celebrations on March 19th were attended by children from over ten schools in North Kerry, local dignitaries, members of surrounding amateur radio groups, including Limerick, Clare, Cork, Tipperary, Galway and Mayo, along with most of the local emergency services, including the Irish Coast Guard, Irish Defence Forces, Kerry Mountain Rescue Team, and Kerry Fire and Rescue Service. Also present were An Garda Síochána, and Limerick Marine Search and Rescue Unit. An indoor exhibition included an impressive display of artefacts from the former Marconi station, as well as a display of morse keys and vintage radios, and talks on the Marconi station.

At 1pm local time, KARG arranged with the Sydney Amateur Radio Club (SARC) in Nova Scotia, to re-enact the original transmission from Ballybunion to Cape Breton. Princess Elettra was on microphone to transmit the message, *"Hello Canada, Hello Canada...This is the Marconi valve transmitter station at Ballybunion Ireland....Calling on a wave length of thirty eight hundred metresCan you hear me?Please report signals"*

Nova Scotia, using the call VA1VAS replied, *"Ballybunion station, this is Nova Scotia. We hear you loud and clear"*.

At 4pm the royal visitors walked to the castle green area overlooking the beach, for the unveiling ceremony of a plaque commemorating the historic event.



Princess Elettra spoke to a large audience: -

"I am very happy to be here to remember my father Guglielmo Marconi at this great event at Ballybunion. For me it is the first time [in Ballybunion]. We had a wonderful welcome and everyone is friendly with us. I feel at home here."

I feel that in the future I will always remember this day, and I love to be in Ireland and Ballybunion. I feel very Irish because my father was half Irish. His wonderful mother Annie Jameson was Irish, and of course, he had all the qualities of the Irish. He had a very strong character, strong will power, and of course he was a genius (applause). He was very proud to be part Irish. I have the same feelings that my father had. I feel very, very close to you and also, I like speaking to you all today. I had the pleasure to have his love as a father on board the yacht Elettra. I have wonderful memories of my father in the radio room. He used to come on deck and play with me, and explain to me what he was doing. It was work with longwave, shortwave and microwave, and telling me about his latest invention. I am a witness because when he was experimenting with radar, I was invited to see the results. He was telling me and my mother Maria Christina, to put a white sheet around the bridge of the ship to simulate fog. He then gave orders to sail Elettra between two buoys, without seeing, except through his instruments. Later he called some experts in London, where he founded the Marconi Company in England, telling them [of his experiment]. As you know, that was the beginning of radar."

And then I remember the astronaut Niall Armstrong when he met my mother. He said, "If it was not for your husband I would not have been to the moon". (applause)

The last invention I will recall today in Ballybunion and it is the truth. He was extracting gold from the sea water. He was showing me, and for me it was magic. I was screaming with joy. Then he died of a heart attack in the winter, and he was unable to complete the invention in the following summer."

Prince Guglielmo went on to speak: -

"I enjoy talking about Ireland as my mother said. I have a very strong Irish links."

When Guglielmo Marconi was in Bologna, Italy, his father Giuseppe was rather sceptical of his crazy idea – a little boy 14 years old – trying to buy strange equipment, and make sort of wizard experiments in his fathers' villa, in the small village outside Bologna. One person that believed in him, and gave him pocket money to buy equipment, was his mother Annie Jameson, who was the daughter of an Irish business family. She was very open-minded and progressive for that period. It was not very common that an Italian man would marry an Irish woman. It was rare in that time. It was a great love. They both met, my grandparents, in Bologna, because Annie Jameson loved music. She loved singing opera and playing the piano, so she went to Bologna for music lessons, and there she met Giuseppe Marconi, who was a widower, and loved music as well. They got married and that's how Guglielmo was born."

At 21 he managed to make the first radio experiment in late December 1895, from the window of the Villa, to the hill which was 2km distant."

Ballybunion was very important, because, in 1919 the Marconi Company took over the railway company, and employed lots of people from this place in order to build a technical modern progressive station, so there was also very strong investment in this area. For around that time in 1919, it wasn't an easy period for the economy.

For me, it is the fifth time I have been in Ireland. I love your country, of course. I was educated in an Irish Christian Brothers School. So, for me, coming back is like coming home. Thank you all. Happy Centenary Day."



The Princess and the Prince jointly unveiled the plaque, as the mist came in from the Atlantic Ocean.

Videos of the plaque unveiling, and of the celebrations at Coláiste Bhréanainn (thanks to Jim Barry EI8GS), are available on the EI100YXQ QRZ page. The EI100YXQ call will be on the air until the end of 2019, on all HF bands and modes. A very nice folded QSL card is available.



Thanks to all that came along to help us celebrate the Marconi EI100YXQ event at Ballybunion. The attendance on the day exceeded all our expectations. Thanks to Mike VE1CYO, and George VE1GV, from the Sydney Amateur Radio Club (SARC) in Nova Scotia, for assisting in the transatlantic QSO, using their club call VA1VAS. VAS was also a very significant call used by Marconi. Thanks to the local YXQ team in Ballybunion - Danny Houlihan, Padraig Hanrahan, TJ McCarron and John Walsh.

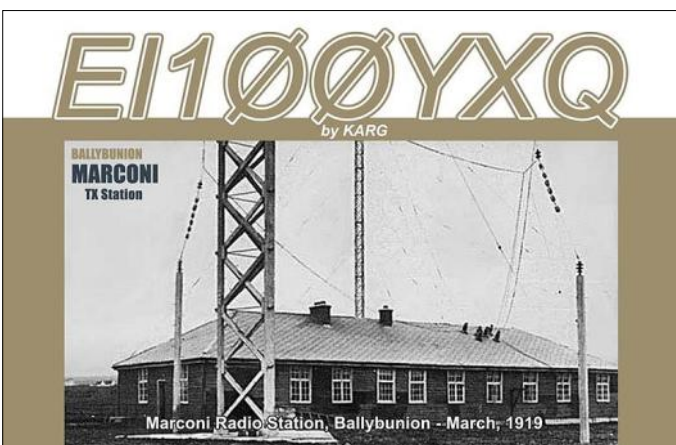
Also, thanks to the guys from the many other surrounding Amateur radio clubs, for joining and assisting us. Special thanks to Brendan Minish EI6IZ, for coming to the rescue on some last minute technical issues, and finally, thanks to KARG members that helped out, especially Billy EI7CQB.

Go raibh maith agaibh go leir, Declan EI9FVB

International Marconi Day 2019

Members of KARG participated in IMD 2019 as an Award station, from the usual venue at the site of the former Marconi radio station in Ballybunion.

While adverse weather conditions the previous evening and night threatened the event, it was decided to go ahead with

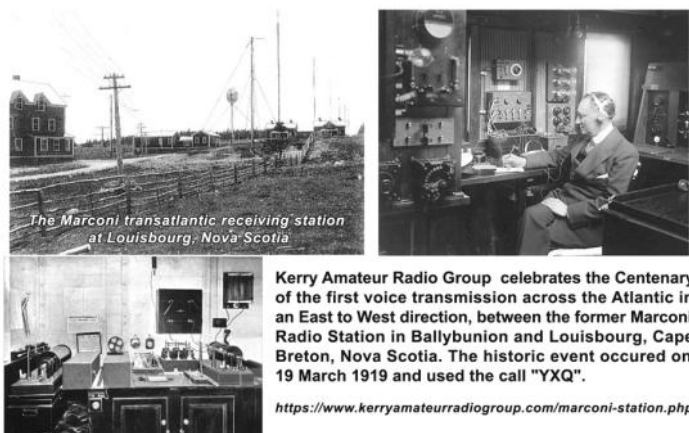


plans. The weather on the day was great, and lots of QSOs were made into Europe and Stateside. We were delighted to make a nice QSO with our friend Barry VO1NC, from the Hearts Content cable station, from where the transatlantic cable from Valentia terminated in 1866.

OH2BAD Visit to Kerry

After many on-air QSOs, it was nice to finally meet well-known DXer Miika OH2BAD and his XYL Raili, on Saturday 27th April, while on their visit to the Kingdom of Kerry. Declan EI9FVB took the opportunity to personally deliver Miika's EI100YXQ QSL card, and well as helping Miika pull some tasty pints of Guinness...Irish style 🍷

Miika was very impressed with the quality of our "Echo Ireland" publication, and agreed to publish an article in the Finnish publication "Radioamatööri" about his trip. Mikka is also Charter President of OH DX Foundation www.ohdx.fi, and brother to OH2BR, Jukka, another well know DXer. They are joint authors of the famous "Radio Amateur's Conversation Guide". Miika was only 12 years old when he became OH2BAD. At that time he was reputed to be the youngest ham in Europe. He is a devoted DXer and has acted as the QSL manager for many Finnish DXpeditions. Miika's XYL Raili, has two ham brothers - Jori OH1QP (owner of Benefon cellular phones company) and Hannu OH1XX (low band world-class DXer).



EI100YXQ

From the site of the first successful East to West transatlantic wireless telephonic transmission

☐ Confirming QSO
☐ Confirming SWL-Report

To Amateur Radio Station: _____

Via: _____

D	DATE			UNIVERSAL TIME UTC	FREQUENCY MHz	2-WAY QSO IN	SIGNAL REPORT		
	M	Y	R				S	T	

RIG	WATTS	ANT

TNX FOR NICE CONTACT, VERY 73

☐ PSE QSL Direct or via Buro
☐ TNX QSL

Grid: IO52DM Worked All Ireland: Q84

QSL via EI9FVB direct or Buro, also LoTW. Please no IRC's, as not accepted in post office.
Visit us on Facebook at Kerry Amateur Radio Group

UNSUO print

EI100YXQ QSL Card - Inside shown above, and front and rear on previous page

Antrim and District Amateur Radio Society

Darren Brown MI0YPT

The Antrim and District Amateur Radio Society (ADARS) year starts in January with our AGM. With the new committee in place we can plan our events and decide on an agenda for each club night which usually includes a talk on a radio-related subject.

The main Field Day type event we do is operating SSB and CW from the site of the listening station in Gilnahirk near Belfast. This was a listening post during WW2 relaying intercepted messages to Bletchley park for decryption. After WW2 it still operated during the cold war up until 1978.

It is now a residential site and the residents there have allowed us, for the last three years, to operate radio for one day in May of each year with a special event station GB0GLS. This was originated and organised by our vice chair Roger MI0WWB.

We have a Field Day on the shores of Lough Neagh, courtesy of Antrim Boat Club, once a year with a BBQ, some radio operating and a social gathering.

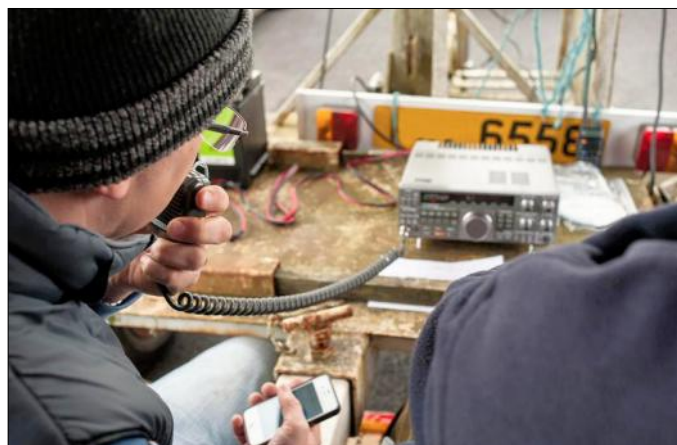
In 2019 ADARS was the first club in Northern Ireland to conduct an exam at Foundation level using the RSGB online service as opposed to the paper exam. Both candidates got

full marks. Committee member Brian MI0WHX worked behind the scenes to make sure this was all possible.

We recently held an Intermediate-level course with an online exam and all four candidates passed with flying colours.

It looks like all our future exams will be done online as this works very well and candidates don't have to wait to find out the results.

We are currently planning a construction day/night where you bring your own kit and get building. We are doing this to encourage people to get their hands dirty and get involved with some practical electronics.



Steven MI0WWF on the mic and Roger MI0WWB beside him at Gilnahirk Listening station site

Limerick Clare Radio Club

Simon Kenny EI7ALB

Limerick Radio Club Name Change

In recognition of the contribution to Amateur Radio by individuals based in Co. Clare, a decision has been taken by LRC to change the name to Limerick Clare Amateur Radio Club. Approval for the name change has been granted by ComReg and IRTS. ComReg have also granted a new call sign EI4LCR. Plans are in place to formally launch EI4LCR, in the mean time, a lot of back ground changes need to be made such as the web site etc. The history of LRC, since its foundation, will be maintained

Our regular club meetings are suspended for the summer break. However, several activities are planned during the summer, not least of which is the International Lighthouse and Lightship Weekend on the third weekend in August. It has been a very popular event with club members over the past eight years. Club members are also encouraged to organise and to participate in the various contests over the summer months. A number of projects are also planned by individual members and at club level.

Vintage Radio Museum & Lartigue Monorail Museum

Members of the club recently visited Eddie Moylan's Vintage Radio Museum in Listowel, Co Kerry. It is an Aladdin's cave of vintage radios, clocks, rare musical instruments, phonographs and a collection of various old tools. In fact there is something of interest for everybody.

The museum was opened in 1986 to mark fifty years of Irish broadcasting. There are more than one thousand items on display, with an extensive collection of receivers (many extremely rare) and vintage wireless literature. Eddie has restored many of the receivers to perfect working order. He has an impressive collection of broadcasting valves from early broadcast Irish Radio and the BBC, and studio microphones from the 1930s and 1940s.

Eddie has a great knowledge of the history of radio and he will also regale you with many anecdotes. The visit was enjoyed by all. Eddie can be found on Facebook, YouTube and other social media sites.



Club members took the opportunity to visit the Lartigue Museum & Monorail, which ran between Listowel and Ballyunion from 1888 to 1924. The monorail was used to transport items for the construction of the Marconi radio station in Ballyunion from where the first transatlantic telephony broadcast was made in March 1919, using the call sign Yankee X-ray Quebec (YXQ). This voice transmission was only possible because Marconi used thermionic valves (vacuum tubes) in his transmitter rather than the spark-gap system which was only suitable for radio-telegraphy (Morse code) operation.



Eddie Moylan's Vintage Radio Museum



*Vintage Radio Museum
Pat EI9GY, Liam EI4GB, Eddie Moylan*



LRC Members visit the Vintage Radio Museum in Listowel



Lartigue Monorail [Photo Pat EI9GY]

South Dublin Radio Club

Séamus McCague EI8BP

Two SDR members were honoured by the award of trophies at the IRTS AGM in the Hodson Bay Hotel, Co. Roscommon.

Tom EI7HT was awarded the Shandon Trophy as the leading station in the 2m (144 MHz) / restricted section of the IRTS VHF/UHF Field Day, while Tony EI7GUB was awarded the Slievenamon Trophy as the leading station in the 23cm (1296 MHz) / restricted section of the IRTS VHF/UHF Field Day.

SDR was awarded the Michael Collins Memorial Trophy for exceptional service to the Society or to Amateur Radio, especially in the area of training, development and/or instruction by either an individual or affiliated club. Michael, who worked in the then Department of Posts and Telegraphs, was tragically electrocuted in his shack at his home at Ashdale Road, Terenure in Dublin in June 1952.

As neither Tom or Tony was able to attend the AGM, IRTS President Jim EI4HH made a presentation to them in his home club, SDR.

[Photos by Joe EI7GY]



Jim EI4HH presenting the Shandon Trophy to Tom EI7HT



Jim EI4HH presenting the Slievenamon Trophy to Tony EI7GUB



Jim EI4HH IRTS President presenting the Michael Collins Memorial Trophy to Tony EI7GUB, SDR chairman

During the year there were regular Morse classes in the club led by Leo EI8BR and Dermot EI6FZ (opposite). One of the graduates was Colm EI4KO and he describes his experiences on page 5.



SDR Morse pupils Colm EI4KO, Derek EI9HSB, Keith EI5KO, Harry EI8HVB and Tony EI7GUB



Irish Radio Transmitters Society AGM 2020

Hosted By The South Eastern Amateur
Radio Group EI2WRC

Saturday & Sunday 18th/19th April 2020

The Woodford Dolmen Hotel

Kilkenny Road, Carlow

Hotel reception : 059 9142002

HOTEL PRICES

**Friday/Saturday Single incl. 2 x
breakfast & one evening meal €254**

**Friday/Saturday Double incl. 2 x
breakfast & one evening meal €288**

Saturday Single incl. breakfast €139

Saturday Double incl. breakfast €149

*****Please use code "IRTS2020" when booking*****

Shannon Basin Radio Club

Brian Canning EI8IU

IRTS AGM hosted by SBRC

We arrived at the Hodson Bay Hotel early on the Saturday morning full of anticipation as to what lay in store for us. The first task was to set up the Windom for the Radio News on the Sunday morning. This went relatively well and we got a good SWR, so we got ready for the three presentations which were to start at 14:00.

Dave EI9FBB gave the first talk on the EIDX Groups DXpedition to Togo - it was very well received. Next was Damien from DroneWorks Ireland. Damien gave a very informative talk on the safe and practical use of drones, together with a hands-on demonstration with one of his DJI drones to show how they could be used to erect wire antennas. www.droneworksireland.ie

Last, but by no means least, was Owen EI4GGB who gave an excellent talk on an Introduction to Embedded Technology and Programming. We learned that this is a technology that we could all use and experiment with starting with the Raspberry Pi.

Saturday evening ended with the annual IRTS dinner where we were well catered for.

It was an early start on Sunday with the first traders arriving at 7:00. We then discovered that our antenna had broken during the night and there was a panic trying to get it fixed before Eddie had to read the news. This was eventually fixed and Eddie read the news from the lobby at the entrance to the rally.

The entrance table to the rally was set up and manned (or womaned) by EI8IU XYL and Junior ops Hannah and Heather. By 10:30 the hall was full of traders and the doors opened.

Marti EI2IAB had some of his scout troop there. Owen EI4GGB showed them how to solder and they made some small electronic kits donated by EI2SBC.



The raffle was very popular and there were numerous prizes. Our sincere thanks go to the traders who donated raffle prizes and also to Begali, Icom, Yaesu and Radionics for donating the main prizes.

Declan EI9FVB won the main prize which was the Begali watch. A highlight for the club was the presentation of a microphone which belonged to EI3Z (the club's contest call) by John Molloy EI6DN.

Morse tests were also held on the day.

All in all, it was a successful weekend, stressful but worth it.

We would like to thank the staff at the Hodson Bay Hotel for all their help and assistance in organising the event. During the Saturday and Sunday, they really pulled out all the stops. Also thanks go to all the traders and exhibitors without whom the rally couldn't have taken place and of course everyone who attended the events over the weekend.

And personally, I would also like to take the opportunity to thank all the members of the Shannon Basin Radio Club for their help and support. Everyone had a role to play and it was a great team effort. *So here's to the next one!!*

Upcoming Club events

IOTA Contest, 2m Counties Contest, Museums On The Air, SSB Field Day,

www.shannonbasinradioclub.com

Photos by Anthony EI6GGB and Joe EI7GY



ShannonBasin Radio Club April 2019

Back L to R, Enda EI2II, Tom SWL, Fergus EI6IB, Craig EI3FW, Tony EI3HA, Mark EI6JK, Owen EI4GGB, Anthony EI6GGB
Front L to R, Niall EI4CF, Paul EI9HQB, Brian EI8IU, Pat EI9HX, Tom EI4HCB



Dave EI9FBB



Damien from DroneWorks



Owen EI4GGB



Pat EI9HX presents the Begali watch to Declan EI9FVB



Dave EI9FBB with flag presented by EI DX Group to IRTS



Owen EI4GGB helps the Scouts to solder



Pat EI9HX presents the EI3Z Microphone to John EI6DN



Eddie EI3FFB Reads the News on 80m

IECRO Ireland Radio Club

Mark Bannon EI6HPB

What is IECRO (Global)?

IECRO stands for “International Emergency Communication Registry of Operators”. It is a global network of communications hobbyists, possessing a mutual interest in the topic of emergency communication resilience.

There are currently four Continental Committees:

- “IECRO Europe”
- “IECRO North America”
- “IECRO South America”
- “IECRO Oceania”

Under IECRO Europe for example, there are affiliated clubs such as “IECRO Ireland” and “IECRO UK”. Such clubs are entirely separate legal entities from one another, however their members have the right to vote in IECRO Europe Committee elections and also take part in the drafting of proposals for improvement of continental activities/operations. These clubs enable members to physically meet up with each other and truly enjoy this aspect of the hobby together as friends.

The entire IECRO network consists of a combined three and a half thousand members, trainees, assistants and affiliate members. This number seems to be continuing to grow larger every few months.

Ok that explains what IECRO is. So, what does “IECRO Ireland” do?

Founded in 2017, our club is relatively new. Like all clubs within the IECRO network, we primarily focus on the promotion/operation of amateur (ham) radio as a hobby. The global IECRO guidelines which we follow instil a strong duty of care towards the promotion of the hobby in a positive light. As a result we as a club try to provide support to other clubs in the country when we feel they are in need of our assistance. Over the past two years we have helped several clubs throughout the country either directly or indirectly in many ways. This help has been provided through assisting them during events where we know they may not have enough volunteers to run a contest station for a few hours etc, or also by helping to train up some of their students for the HAREC exam.

We organise meetings throughout the year where we can discuss and share ideas regarding various communication scenarios. Our membership generally enjoys attending a wide selection of different types of events across the whole of Europe. This year we welcomed a number of IECRO members from North America who came over to the country on holidays. IECRO (global) is a wonderful fellowship/friendship network, being part of it enables you to meet hams from many countries with similar interests.

So attend events and have meetings? Do we actually help out in REAL emergencies? Yes if invited to do so by a national emergency organisation/local response group. Sometimes our membership does also find itself in the tricky situation where they feel ethically duty-bound to carry out self-deployment as good Samaritans if they notice that members of the public are in immediate need of their help. For example throughout the non-too-easily forgotten “Beast from the East” storm in



Public Service - Community Walk

Ireland, a good number of IECRO Ireland members assisted over one hundred people during that period. Many were trapped in their houses, while others had left home and found themselves stranded trapped on the road broken down/stuck. In the case of the former, some of the members who were trained in search and rescue, travelled several kilometres to get to the isolated houses of the infirm/elderly to ensure they were OK. In the case of people trapped in cars on the road, many other members arranged for their cars to be towed, assisted with shovels to dig them out and also provided other related support to them to get them back on their way to safety.

Of course we also help the community during non-emergencies. IECRO Ireland has helped out during local community events throughout the country including walks, races and other forms of social gatherings.

Internationally our club members have assisted in several large-scale disasters including hurricanes, tornados, tsunami and environmental/man-made pollution incidents. We have worked closely alongside disaster relief agencies and amateur radio based response teams located within those regions. Our aim during such events is always in line with international best practices. We ensure that we do not interfere with the normal operations of these relief agencies/teams, instead we work with them upon invite to enhance the services they can provide at those critical moments.

Licensed amateur radio of course is considered our “bread and butter”, however our interests do not stop there. We are willing to utilise any method of communications available to us. During all of our amateur training courses, trainees are exposed to other licence-exempt services available in their country. Obviously in Ireland we have chosen to embrace CB and PMR446 in order to fulfil this training recommendation laid down by the IECRO global committee. By training non-licencees using these licence-exempt tools, they can practice what they learn in classes regarding operational procedure, phonetic alphabet and other topics, on the lead up towards the examination date.

In Ireland, just as in the UK, we also have an additional type of radio which we must train new members up on. Many of IECRO Ireland's membership come from healthcare backgrounds or have received external professional community first aid responder training. We have in the past been pre-invited by some ambulance crews in Ireland to assist them during certain large community-based events. To date

we discovered we were struggling to fulfil this role. Due to global IECRO guidelines, we were duty-bound to explain to the emergency services about the privacy limitations imposed by amateur radio regulations.

However, after intensive discussions, we are now in the very fortunate position to have been authorised use of various encrypted radio services. These obviously operate on non-amateur spectrum and are exclusively for IECRO membership use only. However, in exceptional circumstances where another appropriately trained team of non-IECRO membership require access in order to liaise with us, then it may be possible if strict operational conditions can be adhered to. These services can be used for both training purposes (with prior approval during set classes) and also whilst active at community/public-service events, where potentially sensitive information as stated above needs to be shared (such as casualty records for example) between front-line/voluntary emergency services without breaching patient confidentiality.

Within this encrypted part of our operations, we have a number of voice/data channels allocated exclusively to IECRO Ireland for different purposes. Multiple IECRO member teams can operate independently of each other in a simultaneous fashion on the various systems utilising this spectrum, without concern of ever affecting the others transmissions. Remote access can be obtained at any time to any of these units by one of the administration team.

A unit, if stolen for example, can be disabled and blocked from our network until it is returned. Text-based messaging, live position-tracking and multiple other more-advanced features are available on this encrypted equipment. If a member is believed to be in trouble, a sequence of commands can be sent from one of the administration team to either ping their radio (to find out if it is working, or to find out if they have deviated from the location where they were meant to be at the time). In addition to this, if it is believed that the IECRO member in question has been involved in an accident themselves and cannot reply by pressing PTT, an admin can again remotely request the equipment to switch to VOX mode, so as to monitor and assist the member that way in such potential extreme/dire circumstances.

Standard HAREC Classes/Training

Word got out amongst the other clubs it seems that we were providing amateur training classes in the midlands. After a while we started to receive requests from other Irish clubs for assistance in training some of their HAREC students. These clubs made contact with us as they wanted us to provide some supplemental knowledge/training to these students. Various reasons for this included where some students were felt to be struggling on certain elements of the paper and needed a little more support, or where a club felt they were not in a position to provide practical on the air demonstrations to candidates.

So far, IECRO Ireland has helped to train HAREC license examination candidates from four Irish clubs to date.

Plans have been in place for over a year now to establish an advanced training centre for IECRO in Ireland. This year we are pleased to be able to announce that we will not just have one training centre in Ireland but actually two in the very near future.

The first has just become officially operational and we have students already enrolled with us for the next HAREC sitting at the end of this year. Our second training centre we envisage will be open early next year. Thankfully this of course is not a new process for us to try to learn all by ourselves as a club.

IECRO Ireland has been closely working with IECRO UK to assist with training people over in Britain. As a result IECRO UK has been kind enough to provide us with excellent advice/support in return, regarding how best to manage such centres over here (as they already run four successful ones themselves).

Two of our members have spent a significant amount of time travelling back and forth to one of their centres, located in Coventry, to gain first hand experience of how they do things over there.

So far as a result of all of the above, IECRO Ireland has now been directly involved in the teaching of more than two hundred and fifty hams between the two jurisdictions, the vast majority of these managed to obtain exceptionally high examination results in the end.



Roscommon Emergency Services Open Day

Agricultural Lowland, Highland/Mountains, Bogland, Forestry and Inland Waterways

We have been also busy over the past few months negotiating access to several hundred acres of land nationwide, for the purposes of conducting field days, contesting and advanced skill-based activities such as search and rescue training. We are delighted to report that after numerous discussions with various land owners, permission has now been finally granted.

What about the Automated Stations in the Midlands we keep hearing about? Is there any update?

FM Gateway: EI2SNG was installed onsite a number of weeks ago and for the most part has been providing good service. Our main focus so far regarding this service has involved the conducting of a comprehensive range test, this has been carried out by a team of very dedicated volunteers. Results appear to be quite good so far. A satisfactory number of test QSOs have been conducted via both AllStar and EchoLink, however there have been reports of audio quality issues from AllStar users. Also there have been some incidences where EchoLink has been dropping off randomly and DTMF was not allowing outgoing calls. As such, all of this is currently being investigated to find remedies.

70MHz Simplexer: EI4SNR was also installed after that, however it is utilising similar type of hardware to that of EI2SNG. Due to this, if we can resolve the above problems with EI2SNG we should instantly be able to get this second service operational quickly too.

Multimode DV Gateway: EI7SND requires extensive investigation. Brandmeister network connections are showing up as working totally fine, only minor data packet loss has been detected however there are significant other issues with the RF end of this system. It is currently "back on the bench" and requires looking over with a fresh pair of eyes.

FM Repeater: EI7SNR All equipment for the UHF repeater has been purchased. The transmitter requires configuration and the cavity filters need to be tuned properly, which we hope will take place over the coming days, so that we can get the repeater on the air as quickly as possible.

What Next?

We have a lot of exciting plans lined up for the coming months. For example, last year IECRO Ireland obtained a waterproof base trailer to act as a small mobile event station for contesting, training and rapid deployment. This year one of our members donated to us a second trailer, which at the moment is being kitted out to act as temporary accommodation for up to four members during a weekend (or even week-long events, like the one our club did a few months ago in Wicklow).

A third, larger, mobile unit has been made available to us by another member. This third trailer is huge, to say the least. It needs to be pulled by a strong horsepower tractor, thus will be quite slow moving, however during exceptional snow storms and major flooding, the wheels and frame maintain the

base of the trailer so high off the ground that it is ideal for long-term deployment during very poor road conditions to a region in need of assistance. It is designed to have fold-away beds onboard, a kitchen (including food supply for a fortnight), medical kits (including diabetes glucose testing devices, blood pressure monitor, basic ophthalmic assessment equipment), toilet, all-bells-and whistles radio shack covering full spectrum, a server rack unit, computer terminals, folding table and chairs for hosting a members meeting onsite and....there is more....

The roof of this 20ft long mobile command trailer is to be covered in an adjustable tilt angle solar panel array, so as to generate maximum energy throughout the day. We have plans to construct either a hexbeam and cobweb antenna which will be mounted on a telescopic transportable mast (on another flat trailer) which another member has generously agreed to provide to us for this use once the above unit is completed.

Becoming a Member of IECRO?

In order to become a Member of IECRO, an official application form should be completed and submitted online via the www.iecro.com website.

To be eligible for membership, irrespective of country, an applicant must:

- Be 18 years of age or older
- Be of good character
- Be either currently employed by, retired from, or a volunteer/member of a community/emergency organisation listed on the website OR undergo additional certified training (provided in-house)
- Possess an interest in training to sit a regulatory examination, in order to become a licensed ham radio operator (if not already licensed as such)
- Agree to be bound by the aims/goals of the IECRO

A member of the global IECRO support team then makes contact with the applicant either via email or telephone call to discuss their application.

If the applicant is not ham licensed yet, the IECRO support team member will guide the person in a helpful fashion through the process of becoming licensed. They may recommend various material which the applicant should focus on studying for the regulatory examination applicable to their particular country.

Finally upon obtaining their licence, further training will be required including a short child-protection certified course (provided free by all IECRO clubs).

IECRO guidelines state that all new members should strongly consider joining whatever local ham club is located in their city/area and also they should join IRTS, their national amateur radio society, so that the hobby is strengthened and fully supported.

Contact Us

For any enquiries regarding the IECRO Ireland Radio Club, the secretary may be contacted by email ireland@iecro.com

Alternatively, requests regarding the global network can be made through support@iecro.com or by visiting the international website www.iecro.com.



Excerpts from the HX files

Pat Fitzpatrick EI2HX - Excerpt 046

Hello and welcome to Xtract 046 of the HX Files.

In this HX Files I went out and about with one of the 23cms transmitters to test a before and after a mod that I had done with the ATV transceiver.

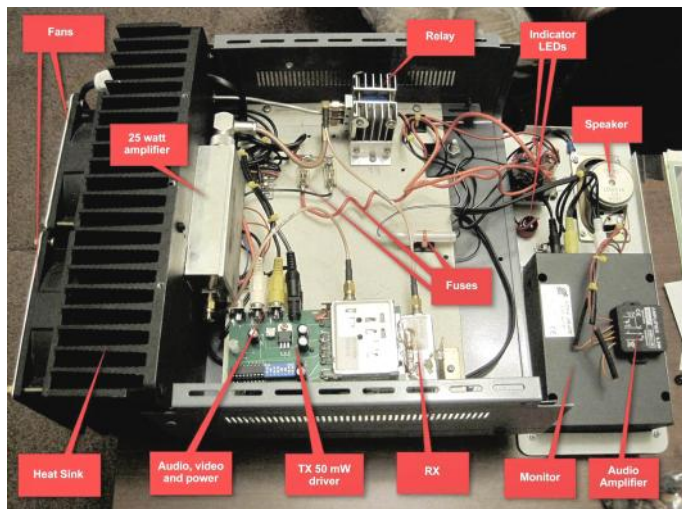


Photo 1, the rig

In photo 1 you can see the transceiver opened up and the layout of parts tagged. The item I changed was the 25 watt amp and replaced it with a 50 watt one that was only 10mm longer and 5mm wider. The mounting holes were a little out of alignment with the original amp so I had a choice to make, widen the existing holes or turn the amp 180 degrees and redrill and thread the new mounting holes in the heatsink. So out came the slighter bigger drill bit and that was that job done.

I did notice that the mounting bolts had a lot of wiggle room even with the bolts tightened down well. I was using some oversize washers to give a good contact from amp to heatsink, so I had a brainwave (no it did not hurt for long!). I used the last of some liquid metal that was in stock and put it into the cavity between the bolts and heatsink. Before it went off, the amp was bolted in place and I used some tape to stop any leakage, I can only imagine the job that it will be to get that amp out; it would be most likely a case of snapping the bolts. You can get the liquid metal in your local motor factors and hardware stores.

As mentioned earlier this job had a before and after; the before was me going to a local spot a few kms from my home and transmitting a signal to my home. Once again I had to employ my brother (it only cost me a Coke Zero and three Tayto*). This time he only had to use the rotator until my signal went P0, and take a note of the beam headings.

A couple of weeks later it was the turn of the "after" part of the job to be done. Once again the brother was on duty to take some more measurements, I did not get off as easily with the Coke and Tayto this time, and as it was near dinner time when the test was completed it cost me a smoked cod and chips.



Photo 2, the location

The results were noticeable, as with the stronger signal my picture was recorded a lot longer before it went P0. It would have been nice to try from a different location a lot further away to test for DX but I knew that might have cost me cigarettes, some wine and a curry, not worth the grief, LOL.

I was parked in the exact same spot (photo 2) as marked on the first trip so at least I could rely on the signals.

Photo 3 is of the shack minus the brother as he said he would sooner remain anonymous, I did not want to push the matter as that could have cost me paper money.

The aerial used on the day was a 7-el looped Yagi, photo 2 is the only one of the location as cue red face, the battery went flat and I did not go back to recreate the test (bold me!). Short and sweet this time dear readers.

May all your signals be P5.

73

Pat EI2HX

**Note: As this is my final edition of Echo Ireland I decided to stet the many references to food. Séamus EI8BP*



Photo 3, the shack



IARU Interim Conference Vienna

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Introduction

In between the IARU Region 1 triennial conferences, an “interim” meeting is held to progress agenda items of relevance to the amateur service. The 2019 Interim meeting was held in Vienna from 26-28 April. Some 60 representatives from European IARU Member Societies attended the meeting, along with some IARU Region 1 Executive Committee members and Permanent Committee Chairs.

Sixty five papers were considered by three conference groups, covering EMC issues, HF matters and VHF/UHF/Microwave frequencies. Topics of particular interest included the work leading up to World Radio Conference, the current position on plans for Wireless Power Transmission, band plans, contest adjudication and EMC threats and related actions.

Agreed recommendations from the interim meeting become IARU Region 1 policy on an interim basis until the next triennial conference when they are submitted for ratification. Details of the proceedings from the 2019 Interim Meeting will be published on the IARU Region 1 website in due course.

Accepted as interim policy – HF Committee

Goal is to align HF band plans across all regions as far as possible.

Although HF Beacons between 1.8 MHz and 10.15 MHz are discouraged, beacons may be established on the 1.8, 3.5 and 7 MHz band in Africa south of the equator

The frequency band 21.125-21.450 MHz is designated for use by amateur satellites on a non-exclusive basis, noting that frequencies above 21.4 MHz are clearly preferred.

Recommended that operators do not use more power than is necessary when using digital modes, and that care is taken to ensure sound cards, interfaces, and other equipment are properly set up so as to minimise the potential for interference.

Recommended that segments of the HF bands continue to be reserved for exclusive CW operation where appropriate.

A network of KiwiSDR receivers with TDoA functionality in strategic locations will be a valuable tool for IARU MS and will encourages member societies to help roll out the network.

Accepted as interim policy – VHF, UHF and Microwave Committee

Future format of the VHF-Handbook will follow Version 8.12 published prior to the Interim Meeting.

Concerning the 430 MHz bandplan:

Change 430 MHz bandplan in the USAGE section:
431.050 – 431.9875 Repeater Input
Region 1, 12.5 kHz spacing, 7.6 MHz shift (f).
438.650 – 439.5875 Repeater Output
Region 1, 12.5 kHz spacing, 7.6 MHz shift (f).

Delete from the 430 MHz bandplan in the USAGE section:

433.000 – 433.375 Repeater Input

Region 1, 25 kHz spacing, 1.6 MHz shift.

434.600 – 434.975 Repeater Output

Region 1, 25 kHz spacing, 1.6 MHz shift.

Add to the 430 MHz bandplan in the USAGE section :

432.600 – 432.9875 Repeater Input Region 1, 12.5 kHz spacing, 2.0 MHz shift.

433.000 – 433.3875 Repeater Input Region 1, 12.5 kHz spacing, 1.6 MHz shift (p).

434.600 – 434.9875 Repeater Output Region 1, 12.5 kHz spacing, 1.6 or 2.0 MHz shift (p)

Add to the 430 MHz bandplan in the USAGE section :

433.000 – 433.375 Repeater Output only in the UK, 25 kHz spacing, 1.6 MHz shift.

434.600 – 434.975 Repeater Input only in the UK, 25 kHz spacing, 1.6 MHz shift.

To implement in the 13 cm bandplan (chapter 1.7, table) a narrowband centre of activity at 2400.5 MHz with coordinated narrowband beacons in the sub-band 2400.8 – 2401.0 MHz.

To add the 40 MHz and the 60 MHz bandplan in the VHF-Handbook in a separate dedicated section (IRTS proposal).

To modify the 70 cm bandplan by deleting the 20 kHz bandwidth entry and change footnote (m) by deleting “in those countries that have the full 10 MHz allocation” and adding “by staying in the segment”. Furthermore, to add a footnote for the LORA usage as proposed.

That work should start immediately on a review of the 50 MHz bandplan, to take account of emerging new requirements (including digital wideband applications), with the intention of presenting proposals for a new bandplan to the General Conference in 2020, including the impact of any outcome from WRC19.

PSK31: Remove specific assignments at 432.088, 1296.138, 2320.138 MHz – enabling all MGM to have equal priority (noting that PSK31 at 144.138 was removed at Landshut)

70cms/EME: Remove the EME CW-only segment in 70cm to create a merged block for all activity at 432.000-432.100 MHz - simplifying the band plan and enabling EME to also use MGM

2.3GHz: Remove Telegraphy ‘Exclusive’ at 2320.000-2320.150 MHz and enable MGM as well.

EU Frequency Footnotes in CEPT ECA: Update all information/references to the latest CEPT ECA definitions/changes for 70MHz, 3.4, 5, 10 and 76 GHz.

To change in the table in chapter 1.8 of the VHF-Handbook “SSB, Telegraphy, MGM” to “allmode” and delete “2700 Hz” in the Range 3.401-3.402 MHz.

Insert following principles in the VHF-Handbook:

Mode Neutrality: The band plans in the VHF Managers Handbook shall remain Mode-Neutral as far as possible including for MGM, Digital Voice(DV), Digital Data (DD) and DATV, avoiding frequency designations for specific digital modes

Whilst the IARU Band Plans should adhere to the 'Mode Neutrality' principle above, Member Societies remain free at national level to coordinate specific mode designations

Bandwidth restrictions should be reviewed and relaxed where possible to facilitate experimental and emerging digital communications modes (but the need to be mode-neutral should still be observed)

Digital developers should be encouraged to avoid embedding or recommending spot frequencies, and instead to consult IARU band planners and incorporate flexibility

Valid QSOs for contests and awards etc. shall respect the IARU-R1 QSO definition and in particular the criteria that the human operator is responsible. This requires that such contacts are not invalidated by the use of automation – such as auto-completion, databases etc.

Encourage MS to implement proposed recommendations:
Appoint a specific microwave manager to help raise the profile of the interest in these bands. (The latest VHF Handbook currently lists just 8).

Engage closely with the activities of national administrations (e.g. replying to consultations and attending workshops) relating to national spectrum management of bands above 1GHz

Member Societies should drive a position with their administration that unrestricted amateur services can successfully share spectrum with commercial users as demonstrated already in some bands.

Engage closely with national administrations to ensure that amateur stakeholder interests feed into international spectrum management developments.

Ensure that national administrations are aware of the interest and opportunity these bands provide for experimentation, training and learning.

Provide incentives to individuals and clubs to encourage construction and operation in these bands (e.g. awards, publicity).

Ensure national administrations understand the importance that the range of amateur allocated frequency bands provides in enabling differing opportunities and challenges for amateur activities.

Be ready to question any unreasonable national restrictions on amateur usage that appear disproportionate or unrealistic.

Add the VHF-, Microwave- and Contest-Managers on the new website.



EMC Matters

Brendan Minish EI6IZ

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IARU Interim Meeting, EMC Committee

On the 27th-28th of April IARU Region 1 interim meeting took place in Vienna. I represented IRTS in my capacity as the IRTS EMC officer.

EMC is under Committee 7 (C7) and C7 had a full programme for the meeting, all the papers are available to download from
<https://vienna.iaru-r1.org/conference-documents/c7/>

Paper VIE19 C7-005 (Ref. 1) was presented by Don, G3BJ (IARU R1 President) and provided a good overview of the potential issues around wireless power transfer. To date most of the standards work in this area is focused on high-power wireless charging for electric vehicles (WPT-EV) and is being driven by the automotive industry.

The planned operating frequency for WPT-EV is 79-90 kHz with power levels between 3-30KW. The issue for amateur radio here are the harmonics (and other spurious emissions) and at present the developers of this standard are seeking a significant reduction in protection levels for the harmonics,

this would have a widespread impact on amateur radio and many other services.

CEPT have produced a good paper on the potential impacts to radio services that may arise from the proposed standard
<https://www.ecodocdb.dk/download/2fed7e3c-7543-ECC%20Report%20289.pdf>

VERON presented the results of an extensive noise measurement study in paper VIE19 C7-007 (Ref. 2). VERON has made measurements of the noise floor at 59 locations in the Netherlands using calibrated test equipment and methods that are compatible with the measurements made in the 1960's that form the basis for the noise floor levels given in ITU R372-P13 (2016) The paper shows that in the Netherlands the noise floor is now significantly higher than the ITU levels in most locations. Their results are shown on the next page.

The hypothesis is that much of the noise floor increase may be due to the cumulative effects of many devices in the vicinity of radio users as the density and diversity of domestic electronics has greatly increased since the 1960s.

Several papers were presented on the IARU noise measurement campaign and there are two projects making good progress.

The DARC backed project (ENAM, paper VIE19 C7-002) is based around the Red Pitaya SDR development board and a custom-designed measurement antenna. This system is now in beta testing and it is expected to have 50-70 units produced and set up to provide ongoing monitoring of the noise floor between 100kHz and 30MHz.

This is a high dynamic range, calibrated system that can produce results that are comparable to the methods used in ITU-R372-P13 and it is envisaged that DARC and other participating national societies will setup and install noise measuring systems at locations suitable for long term monitoring.

The SARL submitted a paper (VIE19 C7-019) but, as they were unable to send a delegate to Vienna, I presented the paper on behalf of Hans (ZS6AKV).

The SARL system is a low-cost system based around an RT-SDR and a linux-based computer such as a Raspberry Pi. The software is open-source and the developers welcome participation. It is not a calibrated system at present although calibration is under development.

This system is an easy project to get started with and makes it simple for amateurs to monitor changes in their own local noise environment over time at little cost.

More information can be found on the project website

<http://rfnoise.amsatsa.org.za/>

There was also discussion around other standards work and it is noted that work is ongoing on the MIMO PLT standard (prEN50561-4). There are issues from a radio user perspective with this draft standard but there are already MIMO products on the market and a standard is required, thus it is expected that there will be an updated draft.

IRTS made observations on prEN50561-4 in late 2018 via our participation in the NSAI TC16 standards committee, and we await the next draft.

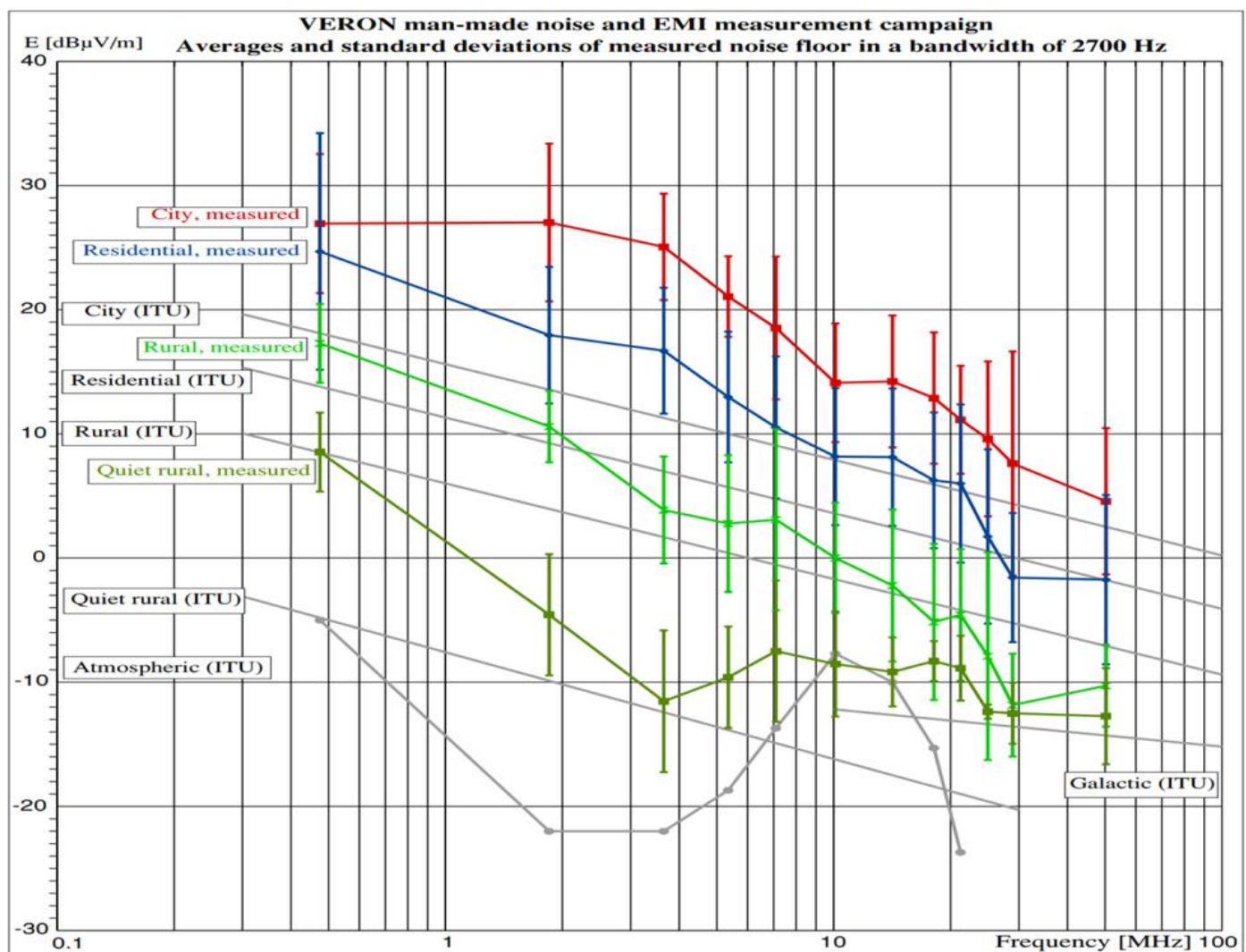
NSAI TC16 meeting 21/05/2019

I attended the bi-annual TC16 working group meeting at the NSAI offices in Dublin. This was well attended and in the meeting wrap up I was able to discuss some of the issues around WPT-EV with the other committee members as there are other services who may wish to keep an eye on the development of the standards.

References

(1) <https://vienna.iaru-r1.org/wp-content/uploads/2019/03/VIE19-C7-005-G3BJ-WPT.docx>

(2) <https://vienna.iaru-r1.org/wp-content/uploads/2019/03/VIE19-C7-007-VERON-Noise-Floor-Measurements.pdf>





Getting Going on 8 Metres

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In this article I describe two projects for the 8m band, a delta loop antenna and a band pass filter (BPF)

A Delta Loop for the 8m band

For many years I have been using a Delta Loop antenna for SOTA (hill top) operation on 4m and 6m bands. They are relatively simple to build, quite tolerant for setup, require only a thin wire and one horizontal support (spreader) attached with tie-wraps to a fiber pole. For a temporary, portable setup that's really all you need.

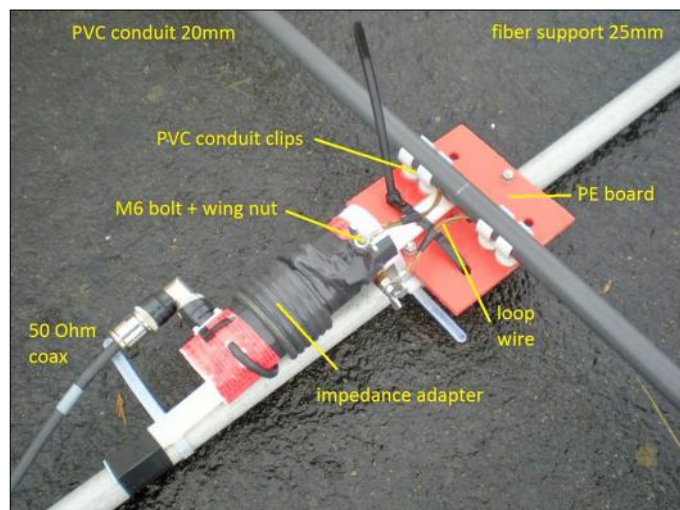
The Delta Loop presents a bi-directional pattern with more noticeable 'null' to its tips than a dipole at the same height. Polarisation is either horizontal or vertical dependent on where the feed-point is: fed at the bottom or at the apex it is horizontal polarisation, fed to one side it is vertical polarisation.

The Delta Loop is a mono-band antenna with an impedance of around 100-120 ohm at the feed point (dependent on the shape of the triangle) thus an impedance transformation to 50 ohm is going to be required. A coaxial "quarter wave transformer" using 75 ohm coax (e.g. RG-59) [$\text{Lambda}/4 \times \text{Velocity Factor}$] will do the trick.



For anyone interested in the low VHF frequencies e.g. 8m band (40MHz) a simple Delta Loop will give you access and improve on reception compared to using your 6m or 4m Yagi.

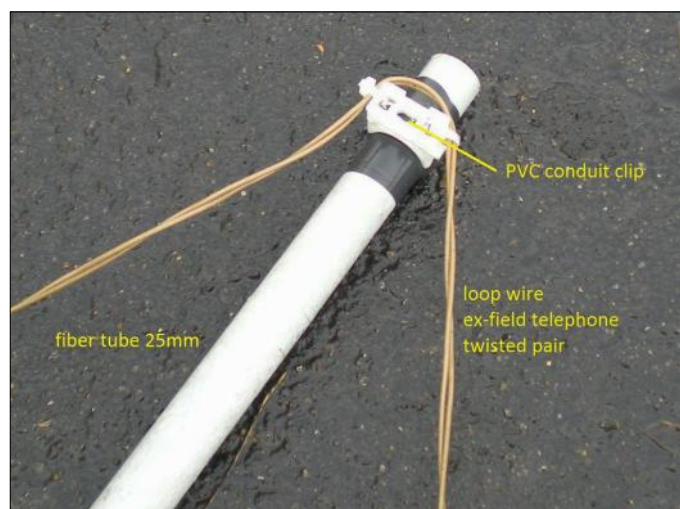
The wire is surplus field telephone twisted pair (very strong, it has an additional metal wire running inside); loop length for 8m is 770cm.



Impedance transformer: 75 Ohm coax RG-59, length 130cm end-to-end; strip back about 1.5cm at either end to solder/attach mechanically.

I have tightly wound the coax onto a diameter 50mm recycled sealant tube and pushed through 6mm holes to firmly hold the ends in place. At one end it is soldered onto an N-chassis connector and at the other end it is soldered to cable shoes which are fixed to M6 bolts. The loop wire also has cable shoes fitted; I use M6 wing nuts for a quick installation. The horizontal spreader is 20mm electrical conduit, the loop wire runs inside and exits near the centre where it is attached to the impedance transformer.

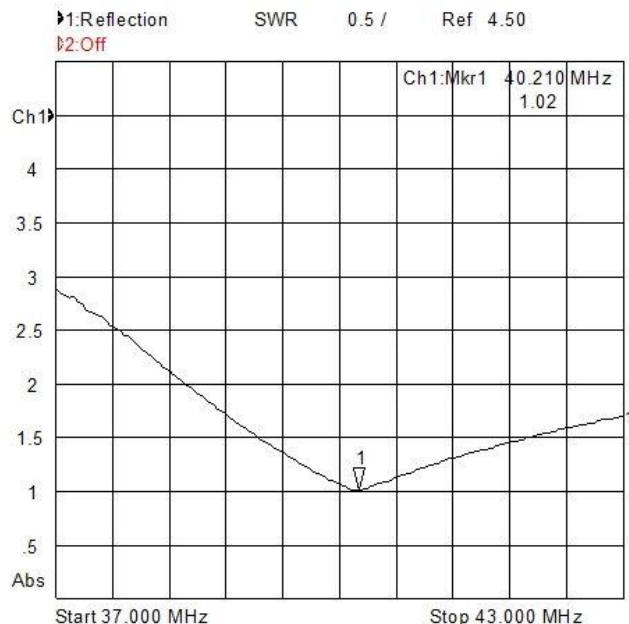
The centre support is cut from 7mm thick (polyethylene) kitchen cutting board. Use a double pair of 20mm PVC clips



to click in the electrical conduit. The board has some extra 8mm holes drilled for tie-wraps as safety catch.

For the apex wire a single PVC clip and tie wrap are sufficient to hold it.

Measurements: the following plot shows the SWR curve of the 8m Delta Loop (in HP at about 5m agl on a fibre mast) with given dimensions for the loop wire and impedance transformer.



A Bandpass Filter for the 8m band

For experiments on the new 8m band (40MHz) including cross band activity (10/8m and 8/6m) a requirement arose for a bandpass filter. My antennas are mounted on the gable wall and all around the house so a strong local RF field (out-of-band signals overloading a receiver's front-end) poses a problem with this kind of setup. The 10m, 8m and 6m antennas are configured in horizontal polarisation. Additionally, in close proximity, are vertical antennas for 8m, 4m and 2m/70cm FM as well as an inverted-V wire dipole for HF bands.

Commercial bandpass filters are available for HF up to 10m, 6m, 2m and 70cm but I rarely come across them at rallies, especially the 100W models. Tried and tested BPF designs for the 6m band (subsequently remodeled for the 4m band) are available on various websites. [Article (printed) by YU1LM, The 4m Forum (<http://www.70mhz.org/>)].

This experimental BPF for 8m is based on those designs. I initially 'remodeled' the filter not by using formulas but by extrapolating onto graphing paper, the curves representing capacitance and inductor values versus frequency. In the process I also traced component values for possible future BPFs for the 9m (34MHz) and 5m (60MHz) bands.

For the capacitors I chose the nearest commercial values from the ATC 100B (500V) series.

Coils would have to be wound by hand on a rigid coil former of chosen diameter. Online programs are available to

calculate "single-layer air-wound coils" inputting whatever wire and core diameter you may have. A wire length of around 300mm is all you need per coil used in this BPF, leaving about 20mm for connecting to the N-socket and copper board. The actual lead length should be trimmed according to box size and chosen board layout.

I used free simulation software called "RFSim99" to run an order-of-magnitude check of the bandpass filter [curve] from the obtained capacitors and inductor values.

Having only 1.40mm² enamel copper wire in my box of spares (a different wire diameter from the original article) the coils needed a few attempts to get to the correct inductance to centre the filter's passband. The air-wound coils have low inductance, typically 200nH ... 500nH, and my LCR meter could not measure them directly.

Initially, the coils for the 8m BPF were "too long", however a typical *passband* around 34MHz was visible on the analyser and coil dimensions were duly noted for a future BPF. Taking two turns off brought the passband nearer to 40MHz. Further tweaking by stretching or compressing the coils brought it to the desired 40-42MHz.

Inline loss and SWR (with a 50 ohm coaxial termination) were measured using a network analyser, all within expectations: loss <0.50dB and SWR <1.20 in the passband.

Of concern to anyone planning to operate on 8m band frequencies would be the third harmonic which falls within the civil VHF Air band. For this BPF suppression at 120MHz was measured at -48dB. This should be seen in addition to filtering by (usually) a lowpass filter built into the transceiver.

Whilst I did not make specific power measurements with given component values (especially using 500V ceramic capacitors) the 50W power level permitted to EI stations should not pose a problem.

With a couple of hours of focus this "kitchen table" project was made for a component cost of around €35. For component values, electrical diagram, construction details and measurements please have a look at the information below.

I hope you will be encouraged having a go at building a BPF for a chosen Low VHF frequency and wish you every success. 73 de Phil EI9KP

List of materials:

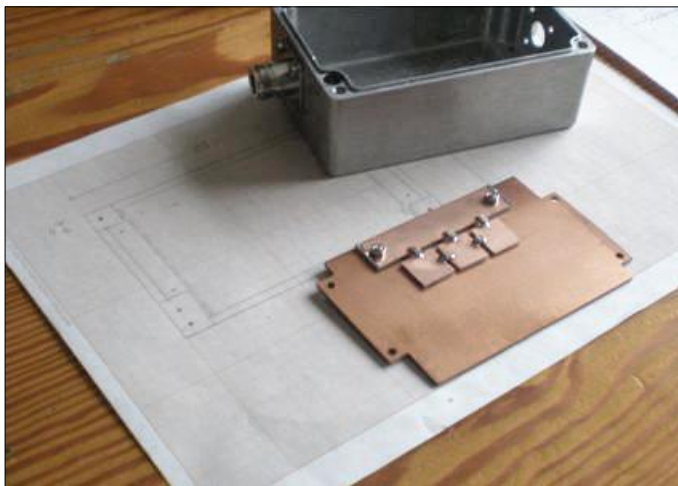
Box: aluminium, screw-on lid, with gasket, external dimensions 125x80x55mm. A smaller model 115x65x55mm would have been suitable as smaller diameter wire was used for the coils.

Connectors: N-chassis connector with 4xM3 screws

Capacitors: ATC 100B series 500V

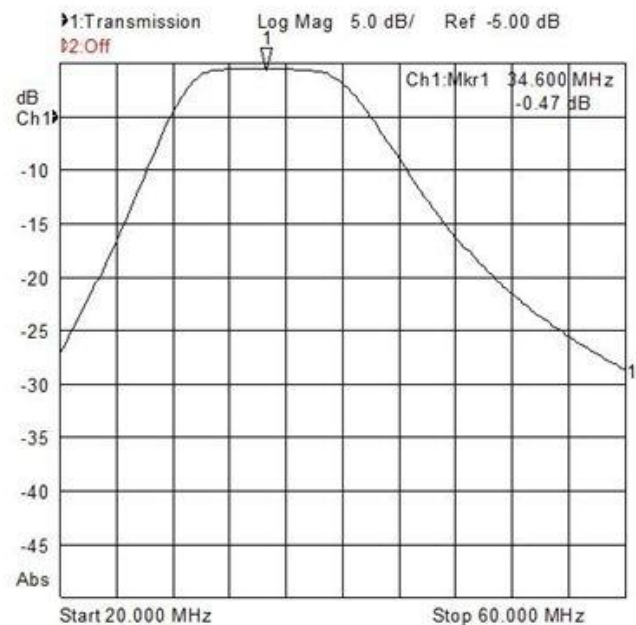
Coil wire: enamel Cu 1.40mm²

Single sided copper board, dimensions 115x75mm for inside box. Off-cuts used as horizontal strip 70x15mm and "solder islands" 15x15mm.

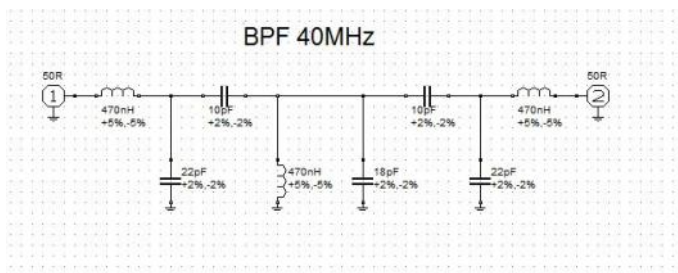


Measurement 1:

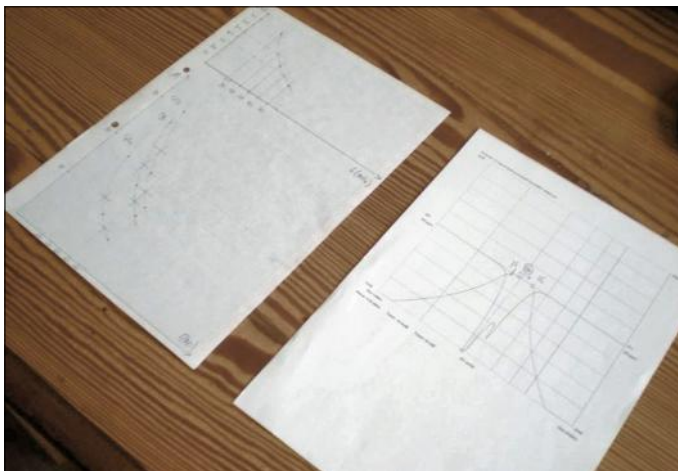
Initial BPF was good for 9m band, passband 32-36 MHz (-0.50dB), CF 33.600MHz. Coils 1.40mm² enamel Cu, 7 turns, 12mm I.D., length 12mm. Calculated coil value: 480nH.



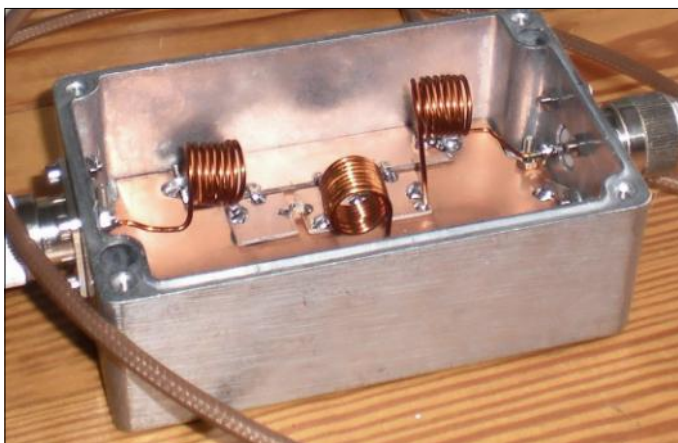
Below: electrical diagram entered into "RFSim99" software.



Below: estimating L and C values using graphing paper, covering 30 ... 70MHz. Band pass filter simulation with chosen L and C values.



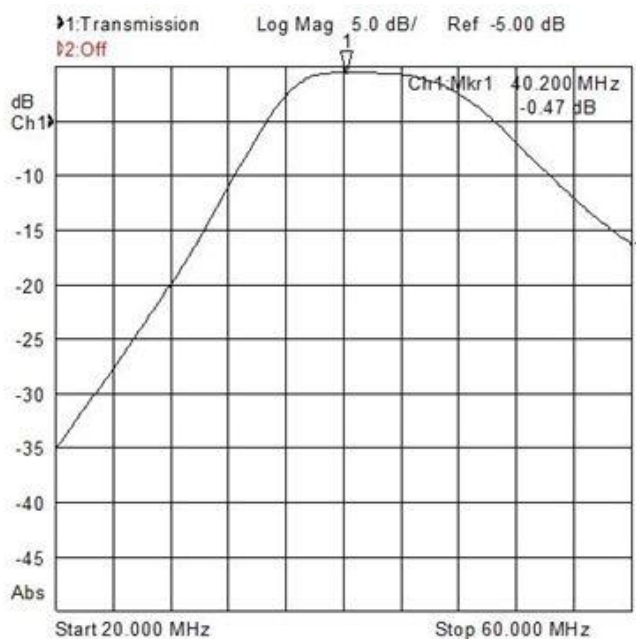
Inside of BPF box:



Note: first try ... coils in above photo tune to 34MHz!

Measurement 2:

Subsequent BPF pass band 40 ... 42 MHz (-0.50dB), CF 41.240MHz, coils 1.40mm² enamel Cu, 5 turns, 12mm I.D., length 10mm. Calculated coil value: 275nH.



- Suppression at ham bands and 8m harmonics: 28MHz: -20dB, 50MHz: -5dB, 70MHz: -25dB, 144MHz: -55dB, 433MHz: -75dB
- 2nd harmonic (80MHz): -32.5dB
- 3rd harmonic (120MHz): -48dB
- SWR with 50 ohm coaxial termination: 1.12 measured at 40.900MHz



HF Happenings (and more)

Don Brennan EI6IL

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Hello again all radio experimenters and shortwave listeners and welcome to another edition of HF happenings. With the longer evenings I start to wean off the radio unless I am chasing a new DXCC or IOTA. I hope folks can get outdoors for antenna maintenance and improvement. Mid Feb. brought lots of decent DX on 160m particularly in the early morning just before sunup. I noticed the same old faces morning after morning pounding the brass and hitting the keyboards trying to work the DX. I am also glad to report that the bands are alive with quite a few new EI ops so a big welcome to all on the bands.

Interesting early morning activity on TB with all the usual suspects including **HK3W** constantly CQing on 160m and working very little. He was +6 dB on my screen but still couldn't hear me. As the mornings got brighter conditions sometimes improved to South America for a short period. Found things hard going during the greyline but during early brightness at 08:00z logged **XE1RF** on 1.840 MHz FT8. **TG9AJR** got away from me in the dark hours but in full daylight I exchanged a report for a new one on topband. Ireland has a nice advantage as we are still in the dark while EU are enjoying the big jumbo breakfast roll.



It's also worthwhile staying on 160m to the bitter end as the band can throw up far away stations like the West coast USA well into EI daylight.

15m was alive and I logged **HSOZBS**, **YB0NFL** and Vietnamese station **3W3B** on 21.025 MHz CW @09:00z

I was delighted to work Declan **EI6FR/P** as he fought through the wild wilderness heavily laden with his radio gear and conquered Saggart Hill **SOTA EI/IE-044**. He brought joy to the other SOTA hunters especially those looking for 80m slippery sideband.

The SOTA mountaineers really appreciate a call as they go to tremendous efforts to activate sometimes very difficult locations in all kinds of weather. They need at least 4 contacts from the peak to count towards their "mountain goat" award.

Declan has used various equipment/antenna configuration to streamline mountain top activity. Hats off to Declan as he pursues the prestigious mountain goat title. Keep an eye out for SOTA operators as it means a lot to them after putting in the time to scale the peaks as we sit in our cosy shacks. Dug into 40m from time to time and worked **VK3KJ** on 7.074 MHz FT8 @ 18:40z, **E76C** on CW, **C6AGU** (Bahamas) 7.011 MHz CW @21:01z, **C5YK** (The Gambia)

7.074 MHz FT8 @21:05z, I always keep both ears on the Antarctic so was happy to log **RI1ANX** on 7.030 MHz @19:33z. **RI1ANX** is a new call-sign of **Oleg** who is actually among a logistics convoy in southern Antarctica and for time to time active on CW 30 & 40 mts bands.

Also logged **RI1ANX** on 10.106 MHz CW @22:02z.

Vlad **UA4WHX** mounted a one-man DXpedition as I worked him on 7.003 MHz CW @19:22z from Seychelles using callsign **S70VB**. He moved to Mauritius using callsign **3B8VB** but I didn't manage a QSO with him. The next leg of his journey was Rodriguez Island callsign **3B9VB** of which I worked him on 20m SSB/CW, 30+40m CW.

He continued his journey to Reunion Island AF-016 as **FR/UA4WHX**. He reported that his QTH was a remote site in Belouve national park (Gite de Belouve). The cabins sit right on a cliff edge, with a valley and town of Hell-Bourg 500m below. Vlad says to get there it took over 3 hours climbing a steep mountain with a 40kg backpack – "quite a challenge" – taking a break every 5 minutes for 5 minutes. He says it was worthwhile because the radio location is 1500m ASL. Logged him on 40+30m with his **FR** call.

Mayotte Island AF-027 was next on his list using callsign **FH/UA4WHX** and I logged him on 10.108 MHz CW @17:50z.

As Feb passed by it brought plenty of DX and **V84SAA** finishing their operation with 58k QSOs in the log. The attention then turned to **XX9D** in Macao as I logged them on 7.003 MHz @18:26z. They were on night and day and sometimes nothing heard in EI. Tried them for ages on 80m CW but no joy. Worked them easily on 80 FT8 and followed up with 40m FT8.

Alaskan station **AL7KO** in Anchorage could be found quite often on HF as I logged him on 10.136mhz FT8 followed by **6W1SR** in Senegal. Other stations worked during February were **9G2HO** (Ghana) 14.045mhz CW @17:45z, **5T5PA** (Mauritania) on 7.155 MHz SSB @21:04z, **VP5/KOPC** (Turks & Caicos Islands) 10.103 MHz CW @21:12z, **9Z4Y** (Trinidad & Tobago) 10.105 MHz CW @21:15z, **TR8CR** (Gabon) 7.031 MHz CW @21:49z, **XX9D** (Macao) 7.070 MHz FT8 @22:12z.

Kuwait National Day is always celebrated on 25 February and the Kuwait Amateur Radio Society activated special event station **9K58NLD** for one day. This holiday marks the day when Sheikh Abdullah Al-Salem Al-Sabah ascended to the throne in 1950.

Kuwait was first established as a small fishing village during the seventeenth century. At the end of the eighteenth century, Kuwait's strategic position enabled it to flourish and become a key trading post and boat building centre in the region. In 1756, the Al-Sabah family became the rulers of Kuwait, starting the dynasty that continues to this day.

In 1899, rather than face direct rule from the Ottoman Empire, Sheikh Mubarak 'the Great' agreed that Kuwait

would become a British Protectorate, with Britain providing naval protection in return for Kuwait allowing Britain to control its foreign affairs.

On 19 June 1961, Kuwait became independent with the end of the British protectorate and the sheikh Abdullah Al-Salim Al-Sabah became an Emir.

Normally most countries celebrate their national day on the same date they gained independence. In Kuwait, this would have meant National Day would be on 19 June, marking the date of independence in 1961.

In fact, the first National Day holiday actually took place on this date in 1962. However, it was felt that the holiday should be moved due to the extreme heat in June, and so from 1963, the National Day was moved to 25 February, marking the date that the Sheikh who was in power at the time of independence, Sheikh Abdullah Al-Salem Al-Sabah came to power in 1950.

The nation-wide festivities include an impressive fireworks display, and public gathering with food and drink and lots of entertainment. Family get-togethers are common on National Day with public areas such as Messila Beach and Al-Sha'ab Leisure Park popular places to meet. To honour their country, many people will dress in traditional customs. The whole country is decorated with lights and the national flag and other patriotic emblems.

Late February brought reasonable conditions if you were prepared to fish around the bands. **Kanton Island OC-043** in Central Kiribati was activated by mostly a German crew using callsign **T31EU**. I spent a few days trying to work out a good time to try a contact. All predictions were pointing at 30m as the best chance and that's the way the cookie crumbled as I logged them on 10.113 MHz CW @17:52z and 10.131 MHz FT8 @08:18z. Only 6 **EI**s made it into their log as it was not easy. Best I heard them was a 579 for only a few mins on 30m. Delighted to work them on 80m CW for a new band. The DXpedition finished up with 39k QSOs which wasn't bad considering conditions.

Tuvalu mini DXpedition **T2AR** was also on air around the same time as **T31EU** so this led to confusion for some of the "cluster operators" often posting the wrong callsign on the cluster as they were pointing and clicking instead of listening. I managed 2 QSOs with them on 30m CW and FT8. 30m has been rocking lately inducing RF into EI receivers. Unfortunately only paper logs were used so difficult to do any post DXpedition analysis or breakdown of where the guys worked/logged.

5X2B in Uganda was active again as I hadn't heard him in about a year. Logged him on 18.156 MHz SSB @12:47z

160m FT8 was alive and well as usual in the dark hours logging **SP7TF**, **LB5WB**, **EA5GHD**, **DK3GZ**, **DO1NT**.

Early morning activity logged **XE1SVT** for a new country on 80m FT8 @07:44z. I was on the lookout for **T31EU** on 80m but nada at my location with central **EU** reporting good signals.

Came across the following somewhat nostalgic QSL card on the internet confirming a QSO between **EJ6FR** and **G3ZAY** from the Great Blasket DXpedition in 1993.



T31EU was making a good trip to EI tonight on 30m CW at 19:00z. Monitored them until they fell out of coverage at approx. 19:30z. They were spotted by some of the big G stations on 40m CW but nothing heard on my side.

KV4FZ is ever present on Topband FT8 with sometimes very impressive signal strengths peaking at +10.

One early March morning brought **ZL** on topband to Western **EU** but nothing received at my station. The Galapagos DXpedition **HD8M** was under way and I logged them on 7.056 MHz FT8 in Fox/Hound mode.

Three members of the 7163 Group activated Santa Cruz Island from February 26 to March 6, 2019 under the call **HD8M**. Their mission was to speak to as many stations around the world while bringing attention to the ecological concerns such as climate change and predators affecting the survival of the unique animal life and vegetation of the Galapagos Islands.

"Ecological damage caused long ago by whalers, pirates, and early settlers, and exacerbated by more recent human activity and the presence of aggressive introduced species, has disrupted natural biological processes in Galapagos and endangered many wildlife species. If left unchecked, the Islands will suffer irreversible losses of native and endemic wildlife and plant species."

Marine wildlife and the marine ecosystem have also been under tremendous pressure, especially due to fishing activities of the last few decades. In addition, ever-increasing maritime traffic and changes in ocean temperatures and currents due to global climate change create the potential for the arrival and establishment of increasing numbers of invasive marine species, which will negatively impact the native ecosystem."

Galapagos penguins, the rarest and most endangered penguin species in the world, are the only penguins that can be found at the equator. Unlike most cold water penguins, they have several adaptations that allow them to tolerate the warmer climate of Galapagos. One of the reasons for their endangered status is that limited options for nest sites exist in the Islands. Many nests used 40 years ago either no longer exist, are used by marine iguanas, or now get flooded."

There is now an attempt by researchers to reverse the decline of the Galapagos penguin population, and to strengthen the population so that it can better withstand the impacts of more frequent and intense climate fluctuations caused by El Niño events."

Zorro **JH1AJT** and the boys were back in Bhutan with the usual callsign **A5A**, They were 59++ on the yagi. I switched over to my buddistick portable antenna which is mounted temporarily in the back garden on a 3m pole. With 100 watts I logged **A5A** after approx 20 mins calling. This proves that with decent conditions DX can be worked from modest setups.

Caught **3W2MAE** from Vietnam on his 20m CW @10:00Z so logged him before the cluster mayhem. Exchanged a few details but moved on as some of the DX community started to call on top of him making it impossible to converse.

Got up early on the weekends during March and heard plenty of new DX on 160m. Unfortunately they were not interested in anything outside of USA/Canada. **ZL2CC** was flying in on 1.840 MHz FT8 but not needed in my shack.

Worked **T31EU** on 10.131 MHz FT8 Fox and Hound. There signal was up and down like a roller coaster but kept moving my transmit frequency up and down the band until he heard me. It's a bad idea to continuously transmit. Just stop TX'ing every few cycles and look for a hole in the spectrum. Best I heard **T31EU** was +03 i.e. they should have been on CW with such a strong signal!

On the pooch for an 80m QSO with **T31EU** and from studying propagation concluded logically that just coming up to the Irish daylight was a possible very small window. They came up at 06:50z on 3.529 MHz with an ESP signal. I could hear them well enough for a possible contact but an inconsiderate contesteer arrived on the DX QRG and started his CQ. He got it in the neck from various stations but continued and destroyed the small window of opportunity.

The **T31EU** famine continued into the late evenings sometimes only hearing them with a received signal strength of 449 on 20m CW.

30m is a hum dinger in times of need producing some of the best DX on the block. Both **RI1ANL** and **EM1UA** from the Antarctic were pounding in on CW and FT8 respectively.

Bagged **XV9YM** and **9X2S** ON 20m CW @12:30z and special call **ZW85LABRE** from Brazil who was working a massive pile. Another common station on air is **TR8CR** from Gabon West Africa as I logged Roland on 40 and 20m CW. Africa was also represented by **6W7/F5NHJ** on 20m CW @19:12z and well known DXpeditioner **F2JD** was down in Honduras again as **HR5/F2JD**. Logged him on 20/30+40m CW.

Logged **VP2EIH** from Anguilla which is located in the wonderful area of Stoney Ground minutes from Shoal Bay Beach & Crocus Bay. His station consists of a Yaesu FT-857 and a homebrew off centre fed dipole at approx. 13m.

5T5PA was very active during Mar and April logging him from 160m – 12m. This time Johannes used mostly FT8. He reports that he is currently learning CW so looking forward to a future CW contact with him.

30m FT8 is a constant now and active 24 x 7. Logged **3B9FR** and moved to 10.105 MHz CW and worked **3B8XF**. Great operator with a steady hand. Still plenty of interest in **3B8** perhaps a new entity for some folks.

Don't forget about the nostalgic RTTY mode. Worked **TO7D** on Guadeloupe Island NA-102 RTTY 10.142 MHz @20:58z.

I always like to make QSOs with EI stations hence logging **EI7M** on 1.904 MHz SSB @00:20z.

Logged **VY2/G3VYI** on 7.014 MHz CW @20:47z. and dipped into 60m FT8 logging **EA8DO**, **I1YTO** and **9A2EU**.

Champ **E21EIC** was active from Bhutan as **A52IC**. Logged him on 80m FT8 for a new country. **A52ZB** was another station from Bhutan and also operating FT8. Logged him on 40m FT8 using the now popular Fox & Hound mode.

Nigel **3B8XF** was doing the rounds and worked him easily on 10.136 MHz FT8 @20:24z.

A team of mostly Norwegian operators were active from Lesotho during March using callsign **7P8LB**. I worked them from 15m to 40m and note 14 EI ops made it into their logbook.

Another DXpedition during March was **XR0ZRC** from Robinson Crusoe Island SA-005. I put many hours in and eventually landed them from 15m to 80m inclusive. Great to see 25 EIs in their log.

A few stations worked during March were as follows:

BD0AAI (China 10.136 MHz FT8 @09:07z)
HR5/F2JD (Honduras 14.080 MHz FT8 @17:42z)
EM1UA (Antarctica 18.100 MHz FT8 @17:48z)
CP6CL (Bolivia 18.100 MHz FT8 @17:59z)
XV9JK (Vietnam 14.155 MHz SSB @16:05z)
E51DOM/MM (South Africa 14.222 MHz @18:04z)
SU9JG (Egypt 7.062 MHz FT8 @20:47z)
5X2S (Uganda 10.137 MHz FT8 @18:37z)
9G2HO (Ghana 3.542 MHz CW @23:26z)
ZL3NW (New Zealand 1.840 MHz FT8 @07:06z)
YF5RFU (Indonesia 1.840 MHz FT8 @18:28z)
VU2IT (India 1.842 MHz FT8 @18:32z)
TG9AJR (Guatemala City 3.575 MHz FT8 @07:33z)
6O100 (Somali 14.080 MHz FT8 @17:30z)
ZL4TT (New Zealand 3.524 MHz CW @06:52z)
JT1CO (Mongolia 1.840 MHz FT8 @20:13z)
OA4TT (Peru 1.840 MHz FT8 @06:02z)

5X3C burst onto the spectrum and thankfully they were using CW, SSB + RTTY. Worked them from 40m to 15m.

My favourite continent was represented by Roman Bratchyk, **UT7UA** using callsign **VP8CTR** from Winter Island, IOTA AN - 006, Antarctica. Logged him on 20 + 17m FT8 as he didn't use any other mode.

Came across **5T5PA** in Mauritania on the old faithful RTTY mode working him all the way from 12m to 80m.

Towards the end of February I saw one decode from **VK0AI** Norbert on Macquarie Island. He was working away with middle EU but not making a decent trip to **Western EU**. I saw just one decode at -24 which is nothing to write home about although he is only using 100 watts which should enable him to hear **EI** using a little more power.

Declan **EI6FR** was on the ball and after a 4 month hunt for Macquarie Island callsign **VK0AI**, he eventually nailed

Norbert on 30m FT8. In a true spirited way he alerted the DX community of Norbert's presence on 30m and that successful contacts were being made in EI/G land. I saw Doug **EI2CN** work **VK0AI** a short time later. The more the merrier as Norbert is finished his rotation on Macquarie sometime in March and it may be quite a while before we see or hear Ham activity from the Island. Interestingly he uses a simple homebrew fishing pole antenna with only 100 watts to satisfy the DX community. Imagine what a Hexbeam and a few extra whiskies could have done for him. I suspect that he may of being restricted with the type of antennas due to the Kamaikaze birds on Macquarie.

And without further ado the Togo boys **5V7EI** burst onto the bands with a bang during March. Approx 5k QSOs within 24 hours. Worked the lads on a few band slots but by far the most difficult was 40m CW. I was receiving them 599++ for hours on the Friday night but fought for a QSO and got into the log at 00:21z. Doug **EI2CN** also fought for a few hours. I believe the lads were experiencing local QRN.

I could hear Thos **EI2JD** from sunup on 20m SSB. I saw some spots for **5V7EI** on 14.030 MHz but when I listened for their call it was **5X3C** !! This is an unusual practice and explains why people don't make it into the log. I was also happy to work **TG9AJR** in Guatemala for a new country on 80m.

I note that **5V7EI** were good readable on 20m SSB from first light to around 08:30z. They then disappeared into the noise for a few hours.

Got up during witching hours at 03:30z and worked **5V7EI** on 40m FT8 after the 2nd call. Went back to the scratcher. Gave the dial a few spins during Paddy's Day with plenty of good wishes particularly from Stateside. During the course of the day logged **5V7EI** on 18.078 MHz CW 09:12z, 14.088 MHz RTTY 11:50z and thrilled to work the lads on Paddy's night at 20:19z on 3.520 MHz CW. Finished the day working Nigel **3B8XF** on 1840 MHz FT8.

I won't go into great detail on the Irish DXpedition to Togo as it will probably be covered by the crew themselves but once again it was a pleasure to hear **EI** ops holding their own from a far away lands. The DXpedition was absolutely spot on with some exemplary operating skills. A credit to the team for going to the trouble and expense in putting Togo on the air like never before. Congrats to Doug **EI2CN** who gave them welly and logged 21 QSOs from 12 to 160m. The team finished with just over 50k QSOs comprising of 19,152 uniques including 94 **EI**'s in the log. This was a mighty effort in approx. 12 days during solar minimum. It shows that **EI** is up there with the cream of the crop. Thank you all.

I had some early mornings on the hunt for **E6ET** in Niue. Got a few sporadic decodes but PSK reporter wasn't receiving them in Western EU. At 07:20z one morning they sprang out of nowhere and best I received them was -02. I got a +02 and was happy with my lot.

April was somewhat quiet in my shack apart from 290 QSOs with the **AM70** special event stations who were spread all over the bands. This was a fun time chasing and would be good practice for new operators to get involved with.

Was on the sharp lookout for **VI9NI** but only saw one decode at 20:15z on April 9th on 10.131 Fox and Hound. All the



monitoring paid off on Sun 14th April when I saw **VI9NI** peak at +02 on 10.131 MHz Fox & Hound mode. Got him on the 2nd call. I was a little suspicious of whether the station signing **VI9NI** was a pirate or not. The beam heading appeared to be ok so I checked signal strengths on PSK reporter and also checked to see what **VI9NI** could hear. It's a handy tool for the study of propagation. As one can see from the screen capture below the timing was just bang on for a 30m contact as **VI9NI** was just coming into his greyline and the USA was in full daylight.

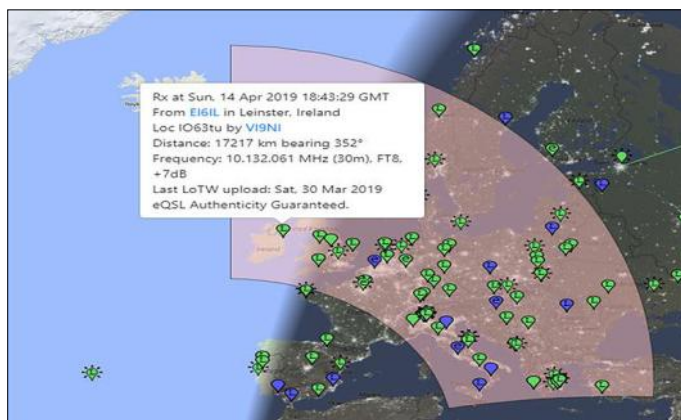
Worked **E6AF** on the Island of Niue during the start of April on 20m SSB. Subsequently heard them most mornings on 20m with varying signals from S1 to S7.

Worked **KH8/OZ0J** in American Samoa on 20m FT8. I saw **KH8** spotted on 10.118 MHz CW but when arrived on frequency there wasn't a tone to be heard. Don't make the mistake and head for the hills as its worth waiting on the frequency for a while. Deep QSB (fading) is a fact of life on the HF bands. Heard them calling NA only at 08:00z but had a good 559 CW signal coming in over the Arctic. Whatever chance I had it disappeared when an **AM70** special event station jumped onto the frequency without checking if it was clear or not. This caused a fist of rage on the frequency but best practice is to ignore and move on. Sometimes the DX station will cop onto the mayhem and move to a clearer frequency either side of the original QRG.

160m went off the boil during the last days of April and 6m started to hot up with some of the "EI Bears" coming out of hibernation.

A few stations worked in April were as follows :

VP8EME (Falkland Islands 1.840 MHz FT8 @22:09z)
6W/IV3FSG (Senegal 21.076 MHz FT8 @12:21z)
Z81D (South Sudan 3.574 MHz FT8 @20:39z)
EP2MLA (Iran 14.220 MHz SSB @15:24z)
5T2KW (Mauritania 18.086 MHz @18:2z)
CX8TC (Uruguay 21.270mhz SSB @19:46z)
RA/EI6DX (Moscow 14.165 MHz @12:02z)
BG7AJH (China 14.120 SSB @14:19z)
T88UW (Palau 10.136 MHz @16:10z)
Z66Z (Kosovo 14.008 MHz @17:21z)
KH8/OZ0J (American Samoa 14.079 MHz FT8 @08:35z) **XT2MAX** (Burkino Faso 14.002 MHz CW @09:11z)
HV0A (Vatican City 14.079 MHz FT8 @17:19z)
KH0/KC0W (Mariana Islands 14.023 MHz CW@09:25z)
EI19RE (50.313 MHz FT8 @10:59z)
YB1TJ (Indonesia 1.840 MHz FT8 @22:45z)



The Rebel DX group under the helm of Dom **3Z9DX** had a failed attempt to get to Bouvet Island during March when their converted trawler Atlantic Tuna got hit badly by a severe Southern Atlantic storm. The team reported to be approx. 70 miles from Bouvet and had to turn back due to vessel damage.

The latest gossip is that the Rebels are planning to attempt Bouvet in the Fall! The team leader also posted online that they were on their way to another location.

Sigi Presch **DL6DF** led a crew to The Gambia from April 1st to 15th and activated three stations from 160m through to 10m on CW, SSB and Digi modes. This team generally mean business and finished up with 32k QSOs.

The Republic of The Gambia is located in West Africa bordering the North Atlantic Ocean and Senegal boasting a tropical climate with a hot, rainy season (June to November) and a cooler, dry season (November to May) Its natural resources include fish, clay, silica sand, titanium (rutile and ilmenite), tin and zircon. With a population of 2,092,731 it got its independence from the UK on the 18th Feb 1965

Geographically surrounded by Senegal, it formed a short-lived Confederation of Senegambia between 1982 and 1989. In 1991 the two nations signed a friendship and cooperation treaty, although tensions flared up intermittently during the regime of Yahya JAMMEH. JAMMEH led a military coup in 1994 that overthrew the president and banned political activity. A new constitution and presidential election in 1996, followed by parliamentary balloting in 1997, completed a nominal return to civilian rule. JAMMEH was elected president in all subsequent elections including most recently in late 2011. After 22 years of increasingly authoritarian rule, President JAMMEH was defeated in free and fair elections in December 2016. Due to The Gambia's poor human rights record under JAMMEH, international development partners had distanced themselves, and substantially reduced aid to the country. These channels are now reopening under the administration of President Adama BARROW, who took office in January 2017.

Some folks may be interested in listening for Islands on the Air (IOTA). All the information one needs can be found on their homepage <https://www.iota-world.org/>. I have always enjoyed chasing IOTA stations and the following is a snippet of some worked since the last Echo Ireland publication.

FH/UA4WHX (Mayotte AF-027), **VP5/K0PC** (Turks & Caicos NA-002), **9Z4Y** (Trinidad & Tobago SA-011), **T31EU** (Central Kiribati OC-043), **T2AR** (Tuvalu OC-015), **FR4QT** (Reunion AF-016), **HD8M** (Galapagos SA-004), **8P5PA** (Barbados NA-021), **ZF2WW** (Cayman NA-016), **3B9FR** (Rodriguez AF-017), **TO7D** (Guadeloupe NA-102), **3B8XF** (Mauritius AF-049), **VP2EIH** (Anguilla NA-022), **XR0ZRC** (Juan Fernandez Robinson Crusoe SA-005), **KL7/VE3LYC** (Alaska Little Diomedea NA-150), **VE1/VE7ACN** (Bell Island NA-081), **PJ2/KB7Q** (Curacao SA-099), **VE1/VA7XW** (Long Island NA-127), **E6ET** (Niue OC-040), **EM1U** (Antarctica Galindez Island AN-006), **GM8OFQ** (Orkney Hoy Island EU-009), **TK4LS** (Corsica EU-014), **CK9/VE7ACN** (Whitehead Island NA-014), **AM670URP** (Balearic Islands EU-004), **AM870RM** (Canary Islands AF-004), **XR1RRC** (Chile Santa Maria Islands SA-069), **8Q7NT** (Maldives AS-013), **E6AF** (Niue OC-040), **KH8/OZ0J** (American Samoa OC-045), **CE7/DL2OE** (Los Lagos region South SA-018), **KH0/KC0W** (Mariana Islands OC-086), **TO19A** (Reunion Island AF-016), **KP4PR** (Puerto Rico NA-099), **RI1OB** (Solovetskiye Islands EU-066), **DU1UD/8** (Philippines Mapin Island OC-105).

Well-travelled DXpeditioner Nobby **G0VJG** was on air from Wallis & Futuna island using **FW5JG**. I heard him short path flying in over the pole on 14.195 MHz @06:30z and asking for **UK/EI**. Logged him on the second call barefoot before the tubes got a chance to glow. He was just as strong on the long path as band conditions were changing. Great operator with a good ear for Western EU.

I then heard Jim **E51JD** for the first time this year so went back to him as usual simplex on 14.218 MHz. I sent a 5 x 8 report and received a 5 x 3. He reported that I was the first **EI** he worked this year as conditions haven't been wonderful into EU lately. I was also conscious that I worked Jim many times on 20m SSB so just had one quick over exchanging pleasantries and moved on as maybe Jim was an ATNO for other stations.

Well folks that's where I leave it for this edition. Although VHF, keep a good ear on 6m as a small antenna can work wonders on the magic band.

Until the next time enjoy the long "summer" evenings and maybe even try a field day to get out into the fresh air.

73 es gd DX, EI6IL in Louth

July		DXpedition Calendar				
2019 Jul05	2019 Jul12	Malta	9H3IK NEW	IK0PUL	TDDX 20190502	By IK0PUL
2019 Jul05	2019 Jul20	Solomon Is	H44MS	DL2GAC	TDDX 20190417	By DL2GAC
RSGB IOTA Contest (Jul 27-28, 2019)						



Contest News

Joe Ryan EI7GY

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IRTS Contest Results (award winners are on the following page)

We have reports on four Counties Contests in this issue. These are small local contests that don't bear much resemblance to the big international 48 hour events that attract so much attention (not all favourable) throughout the year. The Counties Contests are relaxed and friendly, they are also short – the longest being for 2 hours. The more laid-back format of these contests helps to attract newcomers to the sport of amateur radio contesting, providing them with an opportunity to practice operating procedures while experiencing yet another aspect of our hobby. We are fortunate to have a loyal group of regular participants who turn up in good and bad band conditions, helping to make these events viable and, in that way we hope, encouraging newcomers to the sport of amateur radio contesting.

80 Metres Evening Counties Contest (19th March 2019)

This contest was moved from February to March to take advantage of expected better propagation nearer to mid-year. The move paid off (or perhaps we were just lucky!) as band conditions on the night were quite good. 34 transmitting station logs and 1 SWL log were submitted, a more than 50% increase on 2018. Excluding uniques, the logs include 80 call signs from 21 EI and GI counties and 11 DXCC entities. There were more than 900 valid QSOs in the submitted logs this year, three times the equivalent number in 2018.

Short evening HF contests are an excellent way of participating in 'radio sport' without getting too serious. UKEICC run two such contests every month from September to April (one contest a month for SSB and CW, respectively) attracting an average of more than 70 logs for every contest. RSGB also run short evening contests for various modes throughout the year, EI stations regularly participate in these contests. IRTS runs two evening contests a year, the next one is on Tuesday 8th October.

70 cms Counties Contest (22nd April 2019)

Our first 70 cms contest in 2017 attracted 25 logs, in Easter 2018 we received 18 logs, but this year just 9 logs were submitted. I don't know why support has fallen off, but I have to accept that a Counties Contest on this band may not be viable. We will try again in the Autumn, with a short 30 minutes event (see "Forthcoming IRTS Contests", below) and review the position then.

25 EI and GI stations in 17 counties were logged. Not surprisingly, the portable stations fared best, including two ops who had quite a bit of climbing to get to their respective QTHs: David MI/EI7GEB/P on Slieve Binnian (Co. Down), and Albert EI6KO/P on Mullaghcleevaun (Co. Wicklow).

2 metres Counties Contest (22nd April 2019)

While support for this contest was down on previous years, more than 90 EI and GI stations in 28 counties were in the logs. Dundalk Amateur Radio Society, using the call sign EI0W/P in Co. Louth achieved an impressive QSO count of 58 and 18 counties, followed closely by Harper Browne and Colin Williamson, using the call sign MI5AFK/P in Co. Antrim with 53 QSOs and 16 counties. High county multipliers were not exclusively the preserve of portable

stations, the results show that some of the fixed stations worked 10 or more counties. The only counties not logged were Cavan (again!), Kerry, Leitrim and Longford.

40 metres Counties Contest (5th May 2019)

"The conditions were AWFUL / DIRE / ABYSMAL / etc., !!" That was one of the more polite descriptions of band conditions in the logs submitted for this contest. Daytime 40m propagation has been in the doldrums for quite some time, with just occasional upturns, but 5th May was not one of those occasions. There was virtually no short skip and, to add to the challenge, plenty of noise – not necessarily local, as I was experiencing S9 noise levels in the middle of the Slieve Blooms, a very "radio-quiet" area. Despite this, many stations persevered, and we ended up with 21 transmitting station logs, showing activity in 18 EI/GI counties. Propagation on the day meant that Irish stations relied on QSOs with overseas stations, in fact just 30% of EI/GI station QSOs were with other EI/GI stations – the lowest ever proportion.

Forthcoming IRTS Contests

We have a number of Field Days over the Summer months; these coincide with similar IARU Region 1 events, so participants can expect plenty of activity from overseas. Note that the VHF/UHF Field Day covers five bands, 50 MHz (6m), 70 MHz (4m), 144 MHz (2m), 432 MHz (70cm) and 1296 MHz (23cm). Permissible modes are CW, SSB and FM (but the same station may only be worked on one mode). We have separate Open and Restricted sections, with some important differences:

The **Open Section** is designed for groups that can expect to operate on all five bands. Scores for all bands are added together.

There are separate **Restricted Section** contests for each of the five bands, aimed primarily at individuals or smaller groups operating on one or up to three bands. The Restricted Section contests are all scored separately, and – in a change to the rules that previously applied – the same station (i.e. using the same call sign) may submit logs for up to three bands.

Following feedback from those who participated in the April 70 cms and 2 metres contests, the contest periods for these contests on 15th September have been shortened, to 30 minutes for the 70 cms event, and 90 minutes for the 2 metres contest.

VHF/UHF Field Day – Sat 6th July 14:00 UTC (24 hours)

SSB Field Day – Sat 7th September 13:00 UTC (24 hours)

70cm Counties – Sun 15th September 2.00 pm local (30 minutes)

2m Counties – Sun 15th September 2.30 pm local (90 minutes)

Links

Contest rules & calendar:	www.irts.ie/contests
Contest results:	www.irts.ie/results
UKEICC contests	www.ukeicc.com
SD Contest Logger (free)	www.ei5di.com



Photos from the
70cms 2m Contests

Top (L) Albert EI6KO on Mullaghcleevaun Co. Wicklow
(R) Joe EI7GY on the Slieve Blooms
Bottom (L) David MI/EI7GEB in the Mourne Mountains
(R) Tipperary Radio Club on the side of the Comeragh Mountains

Award Winners—IRTS Contests

80 Metres Evening Counties Contest (19th March 2019)

SSB Only, EI/GI Stations
SSB/CW, EI/GI Stations
SSB Only, Outside EI/GI
SSB/CW, Outside EI/GI

EI7HDB, Dale McWilliams
EI7GL, John Desmond
G4IDF, Dave Hobro
G8MIA, Andy Malbon

70 cms Counties Contest (22nd April 2019)

SSB/FM High Power Portable (EI)
SSB/FM Low Power Portable - max. 10W (Outside EI)
SSB/FM Low Power Portable - max. 10W (EI)
SSB/FM High Power Fixed (EI)

EI7GY/P, Joe Ryan
MI/EI7GEB/P, David Morgan
I6KO/P, Albert White
EI4CF, Niall Foley

2 Metres Counties Contest (22nd April 2019)

SSB/FM High Power Portable (EI)

SSB/FM High Power Portable (Outside EI)

SSB/FM Low Power Portable - max. 10W (EI)
SSB/FM Low Power Portable - max. 10W (Outside EI)
SSB/FM High Power Fixed (Outside EI)
SSB/FM High Power Fixed (EI)
FM Only - Single Op. (EI)

EI0W/P, Dundalk ARS
(ops: EI2JD EI2HJB EI8EJB)
MI5AFK/P, Harper Browne
(ops: MI5AFK GI0RQK)
EI6KO/P, Albert White
MI/EI7GEB/P, David Morgan
MI0RRE, Robert Rantin
EI4CF, Niall Foley
EI4GGB, Owen O'Reilly

40 Metres Counties Contest (5th May 2019)

SSB Only Fixed, EI/GI Stations
SSB Only Portable - 100W max, EI/GI Stations

MI0RRE, Robert Rantin
EI2WRC/P, SEARG

SSB/CW Fixed, EI/GI Stations
SSB/CW Portable - 100W max, EI/GI Stations
SSB Only, Outside EI/GI
SSB/CW, Outside EI/GI

(ops: EI2HIB EI2ILB EI3HQB
EI4FNB EI6GVB EI7HKB
EI7HYB EI7IG ALEX (SWL))
EI4CF, Niall Foley
EI5KJ/P, Keith Crittenden
M0NCG, Mark Dumbleton
G4TPJ, Richard Mephram

EI DXCC Single Band Status as at 26th February 2019

Compiled by Joe Ryan EI7GY

		160	80	40	30	20	17	15	12	10	6	2
10	EI2GLB	160	80	40	30	20	17	15	12	10	6	
10	EI2JD	160	80	40	30	20	17	15	12	10	6	
10	EI3IO	160	80	40	30	20	17	15	12	10	6	
10	EI6FR	160	80	40	30	20	17	15	12	10	6	
10	EI7BA	160	80	40	30	20	17	15	12	10	6	
10	EI9FBB	160	80	40	30	20	17	15	12	10	6	
9	EI4DQ	160	80	40	30	20	17	15				6 2
9	EI6JZ	160	80	40	30	20	17	15	12	10		
8	EI1DG		80	40	30	20	17	15	12	10		
8	EI7GY		80	40	30	20	17	15	12	10		
8	EI8IU		80	40	30	20	17	15	12	10		
8	EI9FVB		80	40	30	20	17	15	12	10		
7	EI4BZ		80	40	30	20	17	15		10		
7	EI8GS		80	40			20	17	15	12	10	
6	EI3CTB			40	30	20	17	15		10		
6	EI7JZ			40			20	17	15	12	10	
6	EI9HX			40			20	17	15	12	10	
5	EI4CF			40			20	17	15		10	
5	EI4GJB						20	17	15	12	10	
5	EI4HH						20	17	15	12	10	
5	EI6AL						20	17	15	12	10	
5	EI6JK		40				20		15	12	10	
5	EI9E		80	40			20		15		10	
5	EI9GLB						20	17	15	12	10	
5	EI9JF		40	30			20	17	15			
4	EI3GV						20	17	15		10	
3	EI4GK						20		15		10	
3	EI4GNB						20		15		10	
3	EI5EV						20		15		10	
3	EI6FM						20		15		10	
3	EI6HB						20		15		10	
3	EI7GL		40									6
3	EI8IQ						20		15		10	
3	EI8JX		40				20		15			
3	EI9HQ						20		15		10	
2	EI2II						20				10	
2	EI5IF						20		15			
2	EI7IG						20		15			
2	EI7JN						20		15			
2	EI9CN						20		15			
1	EI3EBB											6
1	EI3HA						20					
1	EI5FQB						20					
1	EI5GSB						20					
1	EI5KO						20					
1	EI6GI						20					
1	EI6S		80									
1	EI9CJ										10	
		160	80	40	30	20	17	15	12	10	6	2

Echo Ireland - the Journal of IRTS,
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Entries in Bold Type show changes since 26th February 2019

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Silent Key Brian Toner EI9AL



It is with deep regret that I learned of the death of my good friend Brian Toner EI9AL. Brian passed away peacefully on 13th April 2019. He had not been well for a few months but he fought a brave battle in the loving care of his wife Nuala.

I first met Brian more than thirty years ago, through our mutual interest in amateur radio. He was a long-time member of Limerick Radio Club (LRC) and took a very active part in Club affairs. He held the position of Club Secretary having served on the committee for a number of years from the early 2000s. He was the well-known voice of the club on Monday evenings, as the reader of the IRTS weekly news bulletins on the Limerick Repeater. He undertook this onerous task for many years and rarely missed a broadcast during his period in this office.

Although Brian was a proud Offaly man, he and Nuala lived for many years in Limerick where he worked in the Administration Section of Limerick City Council.

Brian had a number of other interests other than amateur radio. He was a keen photographer and invariably had his camera to hand whenever he attended a club outing or social event.

Brian had a great love of music and attended many concerts locally at UCH and also at NCH in Dublin with his wife Nuala. He put this interest in music to good effect with his involvement in the internal hospital radio station at UHL, where he regularly presented a musical programme for patients and staff.

Brian took a very active part in St. Pauls - his local parish church.. At his funeral Mass the local parish priest paid tribute to his commitment and dedication to the parish over many years.

Throughout his life Brian was always willing to help anyone in difficulty ... no task was too big and it was always carried out with a smile, in the true spirit of amateur radio. I can only describe Brian as one of God's gentlemen and I'm sure that God has rewarded him accordingly in heaven.

With Brian's passing I have lost a good friend of many years - a friend who will be sadly missed by me and by all his friends in Limerick Radio Club.

On behalf of the Chairman, Committee and members of the Club and on my own behalf I would like to offer deepest sympathy to Nuala and his extended family on their very sad loss.

Ar dheis Dé go raibh a h-anam dílis

Tony Condon EI2AW

Silent Key Ray McCabe EI7AHB



The death took place in April of Ray McCabe EI7AHB. Ray was a great personal friend of mine for almost forty years. I first met Ray in the North Dublin Radio Club shortly after I got my EI6AEB call-sign. He was then working with FÁS and our paths often crossed as we both travelled in our jobs. We would hook up on two-metres and rendezvous for lunch or a pint. McTernan's in Kilcullen or Reddy's in Carlow were our favourite meeting places.

Ray's experience in FÁS made him the ideal person to teach the radio theory classes in NDR. He enthused his pupils with the true amateur spirit of experimentation and ongoing learning. He had a gifted pair of hands and the standard of his home-brew projects made me envious of his abilities.

Ray and I along with John Ryan (EI6DG), another SK, used QSY after NDR on Saturday nights to the Fingal House in Clontarf for a few jars. We would be issued with room keys and after closing time we would move into the residents' lounge! Many a night we emerged at dawn!

Ray was born in Thurles in 1934. He served his engineering apprenticeship in the local branch of Avery weighing scales before emigrating to Halifax where Avery had its headquarters. In the 1950s He returned to Ireland and worked for the Irish agent for Berkel Scales. When AnCO (FÁS) was set up in the 1960s, Ray applied and worked there until he retired.

Ray loved his golf and was a member of Forest Little Club. He dabbled in many hobbies including photography and model aircraft. He was great company, had a great sense of humour and told wonderful yarns. He was a real character. When they made Ray they broke the mould. We'll never see his likes again.

I remember one NDR trip to the Leicester radio rally when Ray headed off to Halifax to see some of his old Avery buddies. On the ferry somebody nicked his bottle of Bushmills. We were all suspect....So many stories I could tell....What great memories!

To his wife Alice and family I extend my condolences. May he rest in peace.

Ar dheis Dé go raibh a h-anam dílis

Tony Breathnach EI5EM

Silent Key Bob Loftus EI7DG / VK2ADG



It is with deep regret we report the death of Bob Loftus EI7DG / VK2ADG formerly of Raheny, Dublin in Australia on the 24th March 2019, aged 71 years. A very active radio amateur, experimenter and constructor, Bob was a well-known operator on the two metre band in the Dublin area in the 1970s and 1980s and specialised in ten metre operation. He was a gifted constructor of HF, VHF and microwave equipment, was awarded the Folan Shield for microwave equipment construction and was a former committee member of IRTS.

Bob studied the City and Guilds Telecommunications course at the College of Technology, Kevin Street, Dublin and went to work for Pye in the UK before returning to Dublin in 1976 and then working for Pye Telecom in Finglas and later at Irish Radiophone in Mount Street.

Bob joined a group of radio amateurs based in the Scouts premises at Ballygall Road, Finglas which soon afterwards became the Fingal Radio Club. He was a very active radio amateur after he got the callsign EI7DG and with his vast technical knowledge was always available to help other members of the club who had recently taken up the hobby. He joined up with Tom May EI7CZ, Gerry Birkhead EI9DZ and Sean Linehan EI7CV to form the first group from Fingal Radio Club to travel to Leicester in the UK for the annual show held there every October. He was the leading Irish station in the June 1984 Practical Wireless 144 MHz QRP Contest, operating portable from Three Rock Mountain.

He emigrated with his family to Australia in 1988 and settled in Sydney where he was employed by the police force dealing with two-way radio, electronics etc. He retired and moved to Batemans Bay, south of Sydney, about two years ago.

Bob acquired his Australian call sign VK2ADG in October 1988 and kept in touch via amateur radio with his friends EI7CV and EI9DZ on 20 metres. Their last sked was via Skype. In retirement he enjoyed restoring old equipment including a Swan 350. He was a member of WIA and BATC and a former President of Batemans Bay Amateur Radio Society. Bob remained an active radio amateur up to the time of his last illness.

We remember Bob as a cheerful and kind gentleman. He is sadly missed by his wife Miriam, children, grandchildren, relatives and a wide circle of friends to whom we express our deepest sympathy.

May he rest in peace

Frank Malone EI6EF

Members Ads

For Sale: EI7CD Shack Clearance:

Hi Mound BK100 Bug Key - €80
Hi Mound BK100 Bug Key, cracked cover - €60
Kent Morse Tutor - €30
Signalink USB Sound Card - €60
Funcube Dongle Pro - €80
Watson Hunter 10MHz - 3GHz Counter - €40
MFJ 1704 4-way coax switch (two) - €50 each
Heathkit HD1234 4-way coax switch - €30
Icom IC-7100 with remote head & mike - €600
Retivis R-511 CTSSS frequency counter - €25
Timewave 599ZX Noise Reducer - €140
Sapel AL1013 10a power supply - €30
Icom SP21 External Speaker - €40
Yaesu FL2050 2m amp - €40
Trio TR2300 2m rig - €30
Samlex SEC1223 23A switched power supply - €50
Zetagi 203 SWRMeter - €25
Sommerkamp/Yaesu FT480R 2m rig - €140
Drake WV4 SWR meter - €60
Termaline 25w Dummy Load - €25
Yaesu SP55 Mobile Extn Speaker - €30
Icom IC-207 VHF/UHF rig with mike - €110
Drake PS7 13.6V 25A Power Supply - €40
Alinco DM-330MW 30A switch-mode PS - €70
Acom 1000 Linear Amp - €1,500
MFJ 259B antenna analyser, leather case - €170
Tokyo HL.90U 430 Mhz linear amp - €120
Collins KWM2A HF Tcvt & PS - €1,100
Tohtsu CX520D 12V coax relay (two) - €50 each
MFJ 914 Auto Tuner Extender - €30
Nentone 12V 6A Power Supply - €15
50W Dummy Load - €25
Comet CF50MR 1kw HF LPF - €40
Drake TV3300 LPF (two) - €30 each
Kent Twin Paddle - €60
Array Solutions AIM4170B Antenna Analyser - €180
UHF 150W Dummy Load - €40

Peter EI7CC 087 134 6191, ei7cc.radio@gmail.com or
Gerry EI8CC 087 961 1961 gerrygervin@gmail.com

For Sale: Quantity of HP 1740 17" LCD monitors, all in working condition. Complete with mains and VGA cables. USB ports, VGA and DVI connectivity, €10 each or 6 for €50
Brian EI8IU 086 251 4822 brianei8iu@eircom.net

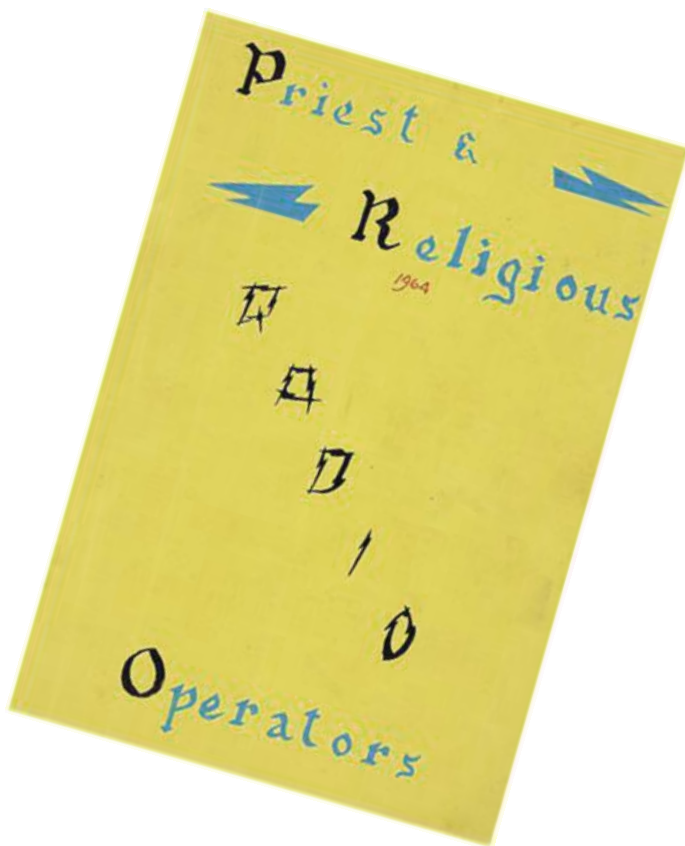
Silent Key Thomas H Perrott EI3JX

Late of Mallow, Co. Cork, Thomas H Perrott passed away in Wexford in March 2019. To his wife and family we extend our deepest sympathies.

"Fair Sailing"

Priest & Religious Radio Operators

Fr. Alan Malone EI3CG / WA7KBN has sent us a copy of an unusual call book that lists priests, brothers, nuns and seminarians with amateur radio licences. Published in the USA in 1964, most of the entries are from the USA, but it also includes operators from other countries. The introduction page refers to "Padre Nets" and "Mission Nets" – in those days probably a useful way for those doing missionary work to keep in touch.



IRTS Shop

IRTS members can avail of a 10% discount on purchases from the RSGB on-line shop.

www.rsgbshop.org



Members should select the "Non-member's Price" before placing the order and then enter the IRTS Discount Code during the checkout process. At this point the discount will be applied.

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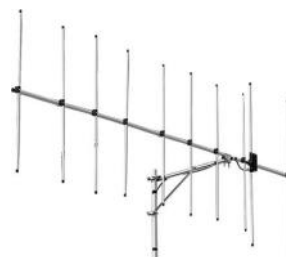
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